



# STIC Search Report

**EIC 1700**

STIC Database Tracking Number: 113150

**TO: Raymond Alejandro**  
**Location: REM 6B59**  
**Art Unit : 1745**  
**February 9, 2004**

**Case Serial Number: 10/037304**

**From: Barba Koroma**  
**Location: EIC 1700**  
**REM EO4 A30**  
**Phone: 571 272 2546**

**barba.koroma@uspto.gov**

## Search Notes

Examiner Alejandro,  
Please find attached results of the search you requested. Various components of the claimed invention as spelt out in the claims were searched in multiple databases.

For your convenience, titles of hits have been listed to help you peruse the results set quickly. This is followed by a detailed printout of records.

Please let me know if you have any questions.  
Thanks.

**SEARCH REQUEST FORM****Scientific and Technical Information Center**

Requester's Full Name: Raymond Alejandro Examiner #: 76895 Date: 01/28/04  
 Art Unit: 1745 Phone Number 301571272-1282 Serial Number: 101037304  
 Mail Box and Bldg/Room Location: Remsen 6B59 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method for assembling battery element group & battery manufactured with the same method.  
 Inventors (please provide full names): Huachong Zhang

Earliest Priority Filing Date: 12/31/01

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

*Please see attached claims 19-29 for specific subject matter to be searched.*

**STAFF USE ONLY**

	Type of Search	Vendors and cost where applicable
Searcher: _____	NA Sequence (#) _____	STN _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: _____	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

## Refine Search

### Search Results -

Term	Documents
(22 NOT 18).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	59
(L22 NOT L18 ).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	59

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L23

Refine Search

Recall Text

Clear

Interrupt

### Search History

DATE: Monday, February 09, 2004    [Printable Copy](#)    [Create Case](#)

## Set Name Query

side by side

## Hit Count Set Name

result set

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ

<u>L23</u>	L22 not l18	59	<u>L23</u>
<u>L22</u>	L21 same (notch or indentation or recess)	80	<u>L22</u>
<u>L21</u>	L20 same (fold or folding or double or doubling or lay or laying)	807	<u>L21</u>
<u>L20</u>	l12 with (electrode or cathode or anode)	15855	<u>L20</u>
<u>L19</u>	L18 not l16	27	<u>L19</u>
<u>L18</u>	L17 same (notch or indentation or recess)	36	<u>L18</u>
<u>L17</u>	L13 same (electrode or cathode or anode)	366	<u>L17</u>
<u>L16</u>	L15 and (electrode or cathode or anode)	13	<u>L16</u>
<u>L15</u>	L14 not l10	264	<u>L15</u>
<u>L14</u>	L13 with (notch or indentation or recess)	264	<u>L14</u>
<u>L13</u>	L12 with (fold or folding or double or doubling or lay or laying)	7372	<u>L13</u>
<u>L12</u>	(plate or grid) with (assembl\$3 or ((brin\$4 or fit or fitting or fitted) together))	398832	<u>L12</u>
<u>L11</u>	L10 not l6	23	<u>L11</u>
<u>L10</u>	L9 same (fold or folding or double or doubling or lay or laying)	30	<u>L10</u>
<u>L9</u>	L8 same (electrode or cathode or anode)	669	<u>L9</u>
<u>L8</u>	L1 with (notch or indentation or recess)	24671	<u>L8</u>

<u>L7</u>	L6 not l4	1	<u>L7</u>
<u>L6</u>	L5 same (electrode or cathode or anode)	7	<u>L6</u>
<u>L5</u>	L2 with (notch or indentation or recess)	359	<u>L5</u>
<u>L4</u>	L3 with (notch or indentation or recess)	6	<u>L4</u>
<u>L3</u>	L2 with (electrode or cathode or anode)	223	<u>L3</u>
<u>L2</u>	L1 with (fold or folding or double or doubling or lay or laying)	6337	<u>L2</u>
<u>L1</u>	(plate or grid) with (embed or embed\$4 or inser\$4 or matrix)	382779	<u>L1</u>

END OF SEARCH HISTORY

=> file caplus

FILE 'CAPLUS' ENTERED AT 16:16:02 ON 09 FEB 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 9 Feb 2004 VOL 140 ISS 7  
FILE LAST UPDATED: 8 Feb 2004 (20040208/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> file wpix

FILE 'WPIX' ENTERED AT 16:16:05 ON 09 FEB 2004  
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FILE LAST UPDATED: 5 FEB 2004 <20040205/UP>  
MOST RECENT DERWENT UPDATE: 200409 <200409/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> NEW WEEKLY SDI FREQUENCY AVAILABLE --> see NEWS <<<

>>> SLART (Simultaneous Left and Right Truncation) is now available in the /ABEX field. An additional search field /BIX is also provided which comprises both /BI and /ABEX <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES, PLEASE VISIT:  
<http://thomsonderwent.com/support/userguides/> <<<

>>> ADDITIONAL POLYMER INDEXING CODES WILL BE IMPLEMENTED FROM  
 DERWENT UPDATE 200403.  
 THE TIME RANGE CODE WILL ALSO CHANGE FROM 018 TO 2004.  
 SDIS USING THE TIME RANGE CODE WILL NEED TO BE UPDATED.  
 FOR FURTHER DETAILS: <http://thomsonderwent.com/chem/polymers/> <<<

=> d que

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L1 ( 114570)SEA FILE=CAPLUS ABB=ON PLU=ON BATTER?
L2 ( 23478)SEA FILE=CAPLUS ABB=ON PLU=ON (MANUFACT? OR ASSEMBL? OR MAKE
    OR MAKING? OR ARRANGE?) (L) BATTER?
L3 ( 23433)SEA FILE=CAPLUS ABB=ON PLU=ON BATTER? (L) DEV/RL
L4 ( 114570)SEA FILE=CAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3)
L5 ( 147979)SEA FILE=CAPLUS ABB=ON PLU=ON POSITIV? (4A) (PLATE? OR
    ELECTRODE?) OR ANODE?
L6 ( 182003)SEA FILE=CAPLUS ABB=ON PLU=ON NEGATIVE? (4A) (PLATE? OR
    ELECTRODE?) OR CATHODE?
L7 ( 94)SEA FILE=CAPLUS ABB=ON PLU=ON (L5 OR L6) AND NOTCHE?
L8 ( 9028)SEA FILE=CAPLUS ABB=ON PLU=ON (L5 OR L6) AND SEPARATOR?
L9 ( 1865)SEA FILE=CAPLUS ABB=ON PLU=ON (L5 OR L6) AND FOLD?
L10 ( 255)SEA FILE=CAPLUS ABB=ON PLU=ON (L5 OR L6) AND S (5A) (SHAPE? OR
    DESIGN? OR CONFIGURATION?)
L11 ( 7)SEA FILE=CAPLUS ABB=ON PLU=ON L7 AND L8
L12 ( 1)SEA FILE=CAPLUS ABB=ON PLU=ON L7 AND L10
L13 ( 5)SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND L10
L14 ( 1)SEA FILE=CAPLUS ABB=ON PLU=ON L7 AND L8 AND L9
L15 ( 0)SEA FILE=CAPLUS ABB=ON PLU=ON L7 AND L8 AND L10
L16 ( 153)SEA FILE=CAPLUS ABB=ON PLU=ON L8 AND L9
L17 ( 162)SEA FILE=CAPLUS ABB=ON PLU=ON L11 OR (L12 OR L13 OR L14 OR
    L15 OR L16)
L18 ( 30)SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND (PUNCH? OR SIZE? OR
    EXPAND? OR WEAVE? OR WOVEN OR CUT?)
L19 ( 51)SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND (LEAD? OR ALLOY?)
L20 ( 22)SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND (STRIP? OR WIRE? OR
    FOAM? OR NET?)
L21 ( 84)SEA FILE=CAPLUS ABB=ON PLU=ON (L18 OR L19 OR L20)
L22 ( 3)SEA FILE=CAPLUS ABB=ON PLU=ON L18 AND L19 AND L20
L23 ( 7)SEA FILE=CAPLUS ABB=ON PLU=ON (L21 OR L22) AND (ALLOY OR
    LEAD) AND (STRIP OR WIRE OR FOAM OR NET)
L24 ( 30)SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND (PUNCH? OR SIZE? OR
    EXPAND? OR WEAVE? OR WOVEN? OR CUT?)
L25 ( 35)SEA FILE=CAPLUS ABB=ON PLU=ON (L22 OR L23 OR L24)
L26 ( 29)SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND L25
L27 ( 1320)SEA FILE=CAPLUS ABB=ON PLU=ON BATTERY? (4A) ASSEMBL?
L28 ( 3)SEA FILE=CAPLUS ABB=ON PLU=ON L27 AND FOLD? AND (LEAD OR
    ALLOY)
L29 ( 4)SEA FILE=CAPLUS ABB=ON PLU=ON L27 AND NOTCHE?
L30 ( 7)SEA FILE=CAPLUS ABB=ON PLU=ON L28 OR L29
L31 ( 36)SEA FILE=CAPLUS ABB=ON PLU=ON L26 OR L30
L32 ( 39)SEA FILE=WPIX ABB=ON PLU=ON L28 OR L29
L33 74 DUP REM L31 L32 (1 DUPLICATE REMOVED)
  
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=> d ti 1-74

YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS, WPIX' - CONTINUE? (Y)/N:y

- L33 ANSWER 1 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method for treating electrode tabs of crude cell for lithium secondary **battery**, and crude cell and lithium secondary **battery** according to the method
- L33 ANSWER 2 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Expanded** zinc mesh **anodes** for **batteries**
- L33 ANSWER 3 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Lithium ion secondary battery.
- L33 ANSWER 4 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Battery package.
- L33 ANSWER 5 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Battery package.
- L33 ANSWER 6 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Comparison in performance between flooded separator and common separator
- L33 ANSWER 7 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Bipolar catalytic secondary **batteries**
- L33 ANSWER 8 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Packing apparatus for an automated **manufacturing** system for a lithium secondary **battery**
- L33 ANSWER 9 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Assembly** of **battery** elements by alternating battery electrodes with intervening separator
- L33 ANSWER 10 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI **Battery** package for sealing electrode **assembly**, comprises laminate sheets having heat-adhesive polymer layer and metal layer.
- L33 ANSWER 11 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Battery mounting structure of fuse box used in motor vehicle, fixes clamp of battery terminal to battery post after fixing battery terminal to terminal piece using nut.
- L33 ANSWER 12 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Battery holder for accommodating button-type battery, has tongue formed by turning tip of arms towards support unit and elastically attached to small diameter portion of battery.

- L33 ANSWER 13 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Battery**, tray and heat shield **assembly**
- L33 ANSWER 14 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Lithium secondary **battery** and procedure for their fabrication
- L33 ANSWER 15 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Group **battery assembly** with valve control type lead batteries for engine start-up of motor vehicle, has anode and cathode terminals provided to **notches** formed on corners of batteries, connected to plug.
- L33 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Air-assisted alkaline **battery** construction
- L33 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Improved process for **manufacturing batteries**
- L33 ANSWER 18 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Laminate-type electric **battery**
- L33 ANSWER 19 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Manufacture** of alkaline secondary **battery** cathode plates and alkaline secondary **batteries**
- L33 ANSWER 20 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Manufacture** of secondary nonaqueous electrolyte **batteries**
- L33 ANSWER 21 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Tray for holding battery in vehicle, has hold down projections and stanchion with ribs having **notches** engages with battery projections and battery handle.
- L33 ANSWER 22 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Battery pack attachment structure for portable telephone, has magnetic inside case, to receive battery pack with **notches** at sides of pack for receiving detachment tool.
- L33 ANSWER 23 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Lithium secondary battery has case which is laminate of polymeric film layer from which metallic foil is taken out, wound along case surface and fixed on thermobonding part of case.
- L33 ANSWER 24 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Solar battery module for mounting in building, has several solar battery units sealed between front lamination sheet and rear lamination coated with non-curing pipe hot melt adhesive.
- L33 ANSWER 25 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Cap **assembly** of secondary **battery**, has **notches** provided to surroundings of bridge where plate equipped with safety valve



is fixed strongly to lead.

- L33 ANSWER 26 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI **Lead acid storage battery** with ribbed bag-like separator for use in cars has a grid filled with a paste of active material, accommodated in a bag-like separator.
- L33 ANSWER 27 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Batteries** with external casing comprising laminated sheets
- L33 ANSWER 28 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Latching **assembly of battery** attachment device.
- L33 ANSWER 29 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Cover fixing method for airtight **lead storage battery** - involves returning hinge of cover to normal state to fix cover in injecting nozzle after removal of residual electrolyte.
- L33 ANSWER 30 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Case of airtight battery of electric vehicles - has tubular body and cover that has **notches** which fit into tubular body aperture edge forming connection which is laser welded.
- L33 ANSWER 31 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Plate assembly manufacture for storage batteries - involves forming mutually lapping assembly of two plates after forming separator layer over one of them.
- L33 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Very thin solid state lithium **batteries** and their **manufacture**
- L33 ANSWER 33 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Torsionally biased latch device for a cellular telephone battery housing - comprises a flange integrally formed with an elongated beam having a predetermined length.
- L33 ANSWER 34 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Terminal **assembly** structure for **battery** used in portable audio equipment e.g. portable type recorder - has hinge part in hinge shaft that is inserted in inner side of termination and cylinder parts.
- L33 ANSWER 35 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Battery charger for battery used in portable electrical equipment e.g. portable phone - comprises battery charger unit connectable with solar cell providing power to charge battery, with cell being stowed in compartment when not in use.
- L33 ANSWER 36 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Pocket type electrode **assembly** for lead-acid storage **battery** - includes synthetic resinous separator and glass mat

coordinately stacked together and then folded to position separator within glass mat.

- L33 ANSWER 37 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Sealed storage battery with safety valve - uses riveted metallic cover plate caulked by rivet gasket and lead piece with terminal cap welded to rivet head and incorporating release valve.
- L33 ANSWER 38 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Manufacture of battery electrodes**
- L33 ANSWER 39 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI **Battery cable assembly** - includes one-piece cover snap fitted to eyelet portion of cable terminal and sealing against housing of battery surrounding terminal.
- L33 ANSWER 40 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Fuel **battery** with anticorrosive electrode **assembly** - has **notches** formed in respective four corners of electrode material, forming paired porous electrode NoAbstract.
- L33 ANSWER 41 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Nickel/hydrogen **batteries**
- L33 ANSWER 42 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Stacked **batteries**
- L33 ANSWER 43 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI **Battery assemblage** with pivotal attachment - uses planar plastic board with cut-out used as lifting handle in upright position and covering terminals when folded down..
- L33 ANSWER 44 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Lead storage battery manufacture involves bonding splash-proof paper to lid having adhesive agent filled groove and notch.
- L33 ANSWER 45 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Simple optimized **lead-acid battery**
- L33 ANSWER 46 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Process for **assembling** separator into **battery**
- L33 ANSWER 47 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Nonsintered hydrogen-absorbing **anodes** and nickel/hydrogen **batteries** using the **anodes**
- L33 ANSWER 48 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Production of enclosed lead storage **battery** - by fitting cell **assembly** into resin case, securing terminal electrodes in **notches** on case with silicone resin NoAbstract.
- L33 ANSWER 49 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

- TI **Lead storage battery** - has cell **assembly** in which cells are supported in accordion-fold thermo-adhesive resin film NoAbstract Dwg 1/3.
- L33 ANSWER 50 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
- TI **Assembling storage battery** - forms projected pawls on opening edge of battery bath, and fits pawls to **notches** on cover plate. NoAbstract Dwg 1/6.
- L33 ANSWER 51 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
- TI **Assembling vehicle battery** plates with microporous separators - by cutting continuous separator roll into sheets, pleating sheets and feeding and assembling plates with sheets.
- L33 ANSWER 52 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Sheet-type **cathode**, its **manufacture** and secondary **battery**
- L33 ANSWER 53 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
- TI Bipolar metal-air battery cell with spring conductors - has contact between consumable anode elements and cathode supports enhanced by air-assisted internal compressive force.
- L33 ANSWER 54 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
- TI Battery with modular air cathode and anode cage - has consumable anode and unitised frame cathode independently removable and reinsertable in cell container.
- L33 ANSWER 55 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
- TI Battery holder for electrical charging appts. - is in two half shells holding clamping insert for two bent contact strips.
- L33 ANSWER 56 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Continuous manufacture of lead-acid battery components
- L33 ANSWER 57 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Electrode assembly
- L33 ANSWER 58 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
- TI **Lead acid battery** cell element **assembling** appts. - has rotary slotted drum inserting positive and negative plates in opposite **folds** in continuous separator.
- L33 ANSWER 59 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
- TI Stacking **lead** battery elements
- L33 ANSWER 60 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Nickel electrodes for secondary alkaline **batteries**
- L33 ANSWER 61 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Primary **battery** for small load currents and long-shelf life and service time

L33 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Lead-acid batteries**

L33 ANSWER 63 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Multicelled **lead storage battery**

L33 ANSWER 64 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Multicelled **lead storage battery**

L33 ANSWER 65 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI **Battery** plate and separator **assembly** - by feeding a **battery** plate into the centre of a separator sheet.

L33 ANSWER 66 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Cell structure for thermal type deferred action batteries - comprises several **folded** metal cells in ring providing high EMF output.

L33 ANSWER 67 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Zinc alkaline secondary **battery**

L33 ANSWER 68 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI **Battery** connecting **assembly** - has camming plate with opening and small **notches** for rapid mounting.

L33 ANSWER 69 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
TI Appts for operations associated with **assembly** of storage **battery** - uses base member provided with lifting handles and nut and bolt pivot.

L33 ANSWER 70 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Electrochemical cells with a lithium **anode**

L33 ANSWER 71 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Metal-oxygen **battery**

L33 ANSWER 72 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Fuel cell with grid electrode

L33 ANSWER 73 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Primary cell having a **folded** magnesium **anode**

L33 ANSWER 74 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Primary cell with U-shaped magnesium **anodes**

=> d all 1-74 l33

YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS, WPIX' - CONTINUE? (Y)/N:y

L33 ANSWER 1 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:988668 CAPLUS  
 ED Entered STN: 19 Dec 2003  
 TI Method for treating electrode tabs of crude cell for lithium secondary  
**battery**, and crude cell and lithium secondary **battery**  
 according to the method  
 IN Hong, Ji-jun  
 PA S. Korea  
 SO U.S. Pat. Appl. Publ.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM H01M002-26  
 NCL 429161000; 029623400  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003232243	A1	20031218	US 2003-446272	20030523
	EP 1387419	A2	20040204	EP 2002-258978	20021224
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	JP 2004022534	A2	20040122	JP 2003-37677	20030217
PRAI	KR 2002-32762	A	20020612		

AB A method for treating electrode tabs of a crude cell for a lithium  
 secondary **battery**, crude cell for a lithium secondary  
**battery** manufactured according to the method, and a  
 lithium secondary **battery** employing the crude cell are  
 disclosed. The method for treating electrode tabs of a crude cell  
 provided with a plurality of **anode** plates having respective  
**anode** grids, a plurality of **anode** plates having  
 respective **anode** grids, and a **separator strip**  
 interposed, in a fold/fold manner, between the  
**anode** plates and the **cathode** plates which are disposed  
 alternately, includes the steps of: (a) gathering the **anode**  
 grids and the **cathode** grids, respectively, so that the grids can  
 be close to a first surface and be substantially parallel to the first  
 surface, and **cutting** the end portions of the **anode**  
 grids and the **cathode** grids so that the **anode** grids  
 and the **cathode** grids can have the shortest length required for  
 being welded to respective tab members; (b) welding an **anode** tab  
 member and a **cathode** tab member to respective end portions of  
 the **anode** grids and the **cathode** grids to form an  
**anode** side welded portion and a **cathode** side welded  
 portion having lengths as short as possible; (c) attaching insulating tape  
 to the **anode** side welded portion and the **cathode** side  
 welded portion so that the insulating tape can wrap the welded portions;  
 (d) bending the **anode** grids and the **cathode** grids at  
 respective first bend portions so that the grids can be close to a second  
 surface which is opposite to the first surface, and be substantially  
 perpendicular to the second surface; (e) bending the respective tab  
 members at respective second bend portions so that the tab members can be  
 close to the respective first bend portion, and be substa.

L33 ANSWER 2 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:656284 CAPLUS  
 DN 139:167002  
 ED Entered STN: 22 Aug 2003  
 TI **Expanded zinc mesh anodes for batteries**  
 IN West, Jack T.; Dyer, Jim; Giles, Albert H.; Headrick, Jon; Smelcer, Johnny; Beets, Randy  
 PA Alltrista Zinc Products, L.P., USA  
 SO U.S. Pat. Appl. Publ., 14 pp.  
 CODEN: USXXCO

DT Patent  
 LA English  
 IC ICM H01M004-42  
 ICS H01M004-74

NCL 429229000; 429245000; 429242000  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003157406	A1	20030821	US 2002-76998	20020215
	US 6673494	B2	20040106		
	WO 2003079466	A1	20030925	WO 2002-US41090	20021220
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2002-76998 A 20020215

AB An **anode** comprises one or more sheets of **expanded zinc mesh**. The thickness and mesh size of the **expanded zinc mesh** may vary. A single sheet of zinc mesh may be coiled, forming continuous elec. contact with itself. Alternatively, a single sheet of zinc mesh may be **folded** into layers, each layer in elec. contact with its adjacent layers. A third alternative is the use of two or more sheets of zinc mesh, layered on top of each other so that each layer is in elec. contact with adjacent layers. These zinc mesh **anodes** are combined with a casing, a **cathode**, an electrolyte solution, and a **separator** between the **cathode** and **anode** to manufacture electrochem. cells.

ST **battery anode expanded zinc mesh**

IT Primary **batteries**

(button-type; **expanded zinc mesh anodes for batteries**)

IT **Battery anodes**

(**expanded zinc mesh anodes for batteries**)

IT 7440-66-6, Zinc, uses

RL: DEV (Device component use); USES (Uses)

(expanded zinc mesh anodes for batteries)

L33 ANSWER 3 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-798780 [75] WPIX

DNC C2003-220417

TI Lithium ion secondary battery.

DC L03 X16

IN KIM, D J; KIM, J H; LEE, J H

PA (SKCS-N) SKC CO LTD

CYC 1

PI KR 2003054026 A 20030702 (200375)\* 1p H01M010-04

ADT KR 2003054026 A KR 2001-84111 20011224

PRAI KR 2001-84111 20011224

IC ICM H01M010-04

AB KR2003054026 A UPAB: 20031120

NOVELTY - A lithium ion secondary battery is provided, to improve the stability and the reliance of a battery by electrically connecting pellet-shaped electrode plates by using a tap with the improved adhesive strength.

DETAILED DESCRIPTION - The lithium ion secondary battery comprises an electrode assembly which comprises a positive electrode plate(23) formed by using a mixture of a conductive powder and an active material, a negative electrode plate(21), and a separator placed between the positive and negative electrode plates and where an organic solvent is impregnated; taps(24, 25) which are fused to the one side of the positive and negative electrode plates, respectively and have projections projected toward the positive and negative electrode plates, respectively; leads(27) connected with the tap; and a case(26) combined with a cover in a body, receiving the electrode assembly. Preferably the projections have an embossed shape or are formed by cutting some part of the tap and folding it.

Dwg.1/10

FS CPI EPI

FA AB; GI

MC CPI: L03-E01B5B

EPI: X16-B01; X16-E02; X16-F03A

L33 ANSWER 4 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-604527 [57] WPIX

TI Battery package.

DC V04 X16

IN KIM, C S

PA (SMSU) SAMSUNG SDI CO LTD

CYC 1

PI KR 2003033215 A 20030501 (200357)\* 1p H01M010-46

ADT KR 2003033215 A KR 2001-64654 20011019

PRAI KR 2001-64654 20011019

IC ICM H01M010-46

AB KR2003033215 A UPAB: 20030906

NOVELTY - Provided is a battery package which can mount a case and a FPC board(flexible printed circuit board) easily in the inside of a battery case by changing the form of connection leads of the FPC board.

DETAILED DESCRIPTION - The **battery** package contains: an electrode **assembly** having a cathode **lead** and an anode **lead**; the case(110) covering and sealing the electrode assembly and having joint parts(112) formed around the upper and lower faces of the case(110), wherein the joint parts(112) are jointed with each other and **folded** and adhered closely to the side of the case(110); the FPC board(130) laminated on the upper or lower side of the case(110), which contains the connection **leads**(131, 135) for connecting to electrode **leads**(103, 105) of the electrode assembly, wherein the connection **leads**(131, 135) have a stair shape by forming first extension parts(132, 136) extended in the extension direction of the electrode **leads**(103, 105), second extension parts(133, 137) extended vertically to the first extension parts(132, 136), and third extension part(134, 138) extended vertically to the second extension parts(133, 137); the battery case in which the case(110) and the FPC board(130) are inserted.

Dwg.1/10

FS EPI  
FA AB; GI  
MC EPI: V04-Q02A; X16-F06; X16-G

L33 ANSWER 5 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-604526 [57] WPIX

TI Battery package.

DC V04 X16

IN KIM, C S

PA (SMSU) SAMSUNG SDI CO LTD

CYC 1

PI KR 2003033214 A 20030501 (200357)\* 1p H01M010-46

KR 388913 B 20030625 (200405) H01M010-46

ADT KR 2003033214 A KR 2001-64653 20011019; KR 388913 B KR 2001-64653 20011019

FDT KR 388913 B Previous Publ. KR 2003033214

PRAI KR 2001-64653 20011019

IC ICM H01M010-46

AB KR2003033214 A UPAB: 20030906

NOVELTY - A battery package is provided, which can reduce thickness of the package and increase energy efficiency by changing the lamination order of a FPC board(flexible printed circuit board).

DETAILED DESCRIPTION - The **battery** package contains: an electrode **assembly**(101) having a cathode **lead** and an anode **lead**; a case(110) covering and sealing the electrode assembly(101), which has joint parts(112)(116) formed around the upper and lower faces(111)(115) of the case(110), wherein the joint parts(112)(116) are jointed with each other and **folded** downward and adhered closely to the side of the case(110); the FPC board(130) laminated under the lower face(115) of the case(110).

Dwg.1/10

FS EPI  
FA AB; GI  
MC EPI: V04-Q02A; X16-F06

L33 ANSWER 6 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN



AN 2003:225965 CAPLUS  
 DN 139:119807  
 ED Entered STN: 24 Mar 2003  
 TI Comparison in performance between flooded separator and common separator  
 AU Bao, You-fu  
 CS Zhejiang Narada Power Source Co., Ltd., Zhejiang, 310013, Peop. Rep. China  
 SO Dianyuan Jishu (2003), 27(1), 5-7.  
 CODEN: DIJIFT; ISSN: 1002-087X  
 PB Dianyuan Jishu Bianjibu  
 DT Journal  
 LA Chinese  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 AB A study indicated that the phys. properties of a **folded** separator such as weight loss, maximal pore size, porosity, and rate of acid absorption are similar to those of common absorptive glass mat (AGM) separators. However, there are differences between their basic weight, elasticity, compressibility, tensile strength and acid absorption value. The gas-recombination efficiencies of valve-regulated Pb-acid (VRLA) batteries assembled with the 2 types of separators differ greatly. The initial performance of a VRLA **battery assembled** with a **folded** separator is improved by an increase in the amount of acid while the gas-recombination efficiency is not influenced. By using the flooded separator electrolyte dry-out does not occur and the floating service life is extended. The amount of acid in a VRLA battery should be controlled in the appropriate range to ensure gas-recombination efficiency.  
 ST flooded separator valve regulated **lead** acid battery  
 IT Secondary battery separators  
 (comparison in performance between flooded separators and common separators for valve-regulated **lead-acid** batteries)  
 IT Secondary batteries  
 (**lead-acid**; comparison in performance between flooded separators and common separators for valve-regulated **lead**-acid batteries)

L33 ANSWER 7 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:354006 CAPLUS  
 DN 136:343387  
 ED Entered STN: 12 May 2002  
 TI Bipolar catalytic secondary **batteries**  
 IN Rhoten, Kenneth Dale  
 PA USA  
 SO U.S. Pat. Appl. Publ., 15 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM H01M002-18  
 ICS H01M004-70; H01M004-58  
 NCL 429136000  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2002055037	A1	20020509	US 1999-301227	19990429
PRAI	US 1999-301227		19990429		

AB An environmentally responsible and non-toxic alkaline cell, is both catalytically and elec. rechargeable, consisting of one or more iron **anodes**, as well as a zinc **cathode**, all immersed in an aqueous solution of potassium hydroxide in a plastic container. The cathodic material is cast zinc and is preferably wrapped in a special sheet of studded rubber provided with either a semi-perforated edge or a specially serrated edge on both sides to permit ionic communication between **anodes** and **cathode**. This rubber sheet should also be equipped with diagonal grooves on at least one side of the material. The **anodes** consist of thin, mild steel stampings, made to a special pattern, and are preferably blued to resist rust. The tips of these **anodes** are then coated with a paste prepared from one part 100 mesh iron powder to one part 100 mesh activated carbon powder. To form the paste, the powders are first thoroughly mixed dry and then properly wetted with distilled water. After both sides of the **anode** tips have been properly coated with the paste, they are then covered with tightly **woven** nylon sacks which are made to snugly fit over the tips. These **anodes**, being perforated, are then **folded** and tightly closed, thus forming dual anodic configurations which can be, by varying the length of the connective **strip** between them, readily doubled, tripled or even quadrupled. They are mounted in saddlebag fashion around the zinc **cathode**. The plate **separator** consists of a hard rubber ring with a flat bottom, supplied with one or more vertical **notches**, corresponding to the one or more **anodes** designed to rest in them. When the cell is fully assembled with a hard rubber cover, properly sealed and provided with a vent, filler opening and plug, the electrolyte is then added and is topped off with a special oil mixture. The cell thus made, having been thoroughly activated by elec. charging, will tend to resist most of the chemical reactions of discharge by catalysis until saturation and its resultant crystalline product must be reversed by elec. charging.

ST **battery** secondary bipolar catalytic

IT Secondary **batteries**  
 (Fe-Zn; bipolar catalytic secondary **batteries**)

IT Hydrocarbon oils  
 RL: DEV (Device component use); USES (Uses)  
 (bipolar catalytic secondary **batteries**)

IT Polyamide fibers, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (finely **woven**; bipolar catalytic secondary **batteries**)

IT Rubber, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (insulator; bipolar catalytic secondary **batteries**)

IT Liquids  
 (oils, light, lamp-grade; bipolar catalytic secondary **batteries**)

IT 1310-58-3, Potassium hydroxide, uses 7440-66-6, Zinc, uses

RL: DEV (Device component use); USES (Uses)  
 (bipolar catalytic secondary batteries)  
 IT 11121-90-7, Carbon steel, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (bipolar catalytic secondary batteries)  
 IT 7439-89-6, Iron, uses 7440-44-0, Carbon, uses  
 RL: DEV (Device component use); USES (Uses)  
 (powder; bipolar catalytic secondary batteries)  
 IT 12597-68-1, Stainless steel, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (stud; bipolar catalytic secondary batteries)

L33 ANSWER 8 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:900386 CAPLUS  
 ED Entered STN: 27 Nov 2002  
 TI Packing apparatus for an automated manufacturing system for a  
 lithium secondary battery  
 IN Hong, Ji-jun  
 PA Kokam Engineering Co., Ltd., S. Korea  
 SO Eur. Pat. Appl.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM H01M010-04  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1261061	A2	20021127	EP 2002-253591	20020522
EP 1261061	A3	20040114		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
WO 2002095845	A1	20021128	WO 2002-KR934	20020517
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI KR 2001-28495 A 20010523

AB The packing apparatus (350) comprises: a frame (301); a base member (210) mounted to the frame, and having a receiving rack (212) for receiving a batch of separator both surfaces of which are laminated with pos. electrode plates and neg. electrode plates in a predetd. pattern; a stopper member (220) movable so as to selectively approach one end of the base member for preventing the separator being supplied to the base member from being separated from the receiving rack; a folder member (230) movable with respect to the receiving rack so that the folder can press the separator supplied to a receiving space formed by the receiving rack and the stopper member for predetd. duration, and

fold the separator so that both side sections of the folded separator can have generally the shape of "Z", and the pos. electrode plates and the neg. electrode plates can alternate with each other; and a cutting/taping member (240) for moving the folded separator to a predetd. area, cutting the separator at a non-electrode plate area to which no electrode plate is attached, and taping the folded and cut piece of separator.

L33 ANSWER 9 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:517992 CAPLUS  
 DN 137:81366  
 ED Entered STN: 12 Jul 2002  
 TI Assembly of battery elements by alternating battery electrodes with intervening separator  
 IN Zhang, Huangnong  
 PA Xiongtao Power Supply Technology Co., Ltd., Peop. Rep. China  
 SO Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC H01M006-10; H01M010-14  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 Section cross-reference(s): 72

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1221731	A2	20020710	EP 2002-75044	20020102
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	CN 1363961	A	20020814	CN 2001-117743	20010508
	US 2002108234	A1	20020815	US 2001-37304	20011231
PRAI	CN 2001-107409	A	20010103		
	CN 2001-117743	A	20010508		

AB Assembling of a battery element group includes the steps of folding the plates, arranging the pos. and neg. plates alternately, inserting a plate with one polarity into a laminated area of the plate with the opposite polarity, and providing a separator between the pos. and neg. plates. When one plate with one polarity is folded into a continuous S-shape along the separator, the plate with the opposite polarity is inserted into the laminated area of the first plate. The plate grid material is preferably fabricated from lead, lead-base alloy, iron-base alloy, copper-base alloy, or nickel-base alloy. The device improves the efficiency of electricity production, decreases the formation of waste products, decreases the resistance, and increases high-current discharge performance.

ST battery assembly electrode plate fabrication  
 IT Battery electrodes  
 Primary battery separators  
 Secondary batteries

Secondary battery separators

(assembly of battery elements by alternating battery electrodes with intervening separator)

IT Copper alloy, base

Iron alloy, base

Lead alloy, base

Nickel alloy, base

RL: DEV (Device component use); USES (Uses)

(battery grid material; assembly of battery elements by alternating battery electrodes with intervening separator)

IT 7439-92-1, Lead, uses

RL: DEV (Device component use); USES (Uses)

(battery grid material; assembly of battery elements by alternating battery electrodes with intervening separator)

L33 ANSWER 10 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-138300 [13] WPIX

DNN N2003-109676 DNC C2003-035121

TI Battery package for sealing electrode assembly, comprises laminate sheets having heat-adhesive polymer layer and metal layer.

DC L03 X16

IN AIHARA, S; ARAGANE, J; ICHIMURA, H; KAWAGUCHI, K; KISE, M; MORIYASU, M; MURAI, M; NAKADEGUCHI, S; NISHIMURA, T; OZAKI, H; SHIOTA, H; TAKEMURA, D; TSUKAMOTO, H; URUSHIBATA, H; YOSHIDA, Y; YOSHIOKA, S

PA (NIST) JAPAN STORAGE BATTERY CO LTD; (MITQ) MITSUBISHI DENKI KK

CYC 1

PI US 6482544 B1 20021119 (200313)\* 11p H01M002-08

ADT US 6482544 B1 US 2000-608007 20000630

PRAI US 2000-608007 20000630

IC ICM H01M002-08

ICS H01M002-00

AB US 6482544 B UPAB: 20030224

NOVELTY - A battery package comprises laminate sheets having a heat-adhesive polymer layer and a metal layer which prevents moisture penetration and provides a shape-keeping ability to the laminate sheets.

DETAILED DESCRIPTION - A battery package comprises laminate sheets adhered to each other along the peripheries of the laminate sheets to form a container portion for receiving an electrode assembly and a seal portion (16) surrounding the container and protruding outwardly from side faces of the container. The seal portion prevents moisture penetration. The laminate sheets include a heat-adhesive polymer layer and a metal layer which prevents moisture penetration and provides a shape-keeping ability to the laminate sheets. The seal portion is folded or curled onto itself to reduce a projection area of the battery package.

USE - For sealing an electrode assembly.

ADVANTAGE - The invention reduces weight and thickness of the battery and has small projection area and high reliability. It also improves the volumetric energy density of the battery by reducing its projection area, while maintaining the reliability of the battery with wide seal portion.

DESCRIPTION OF DRAWING(S) - The figure is a perspective view of a battery.

Seal portion 16

Dwg.2A/6

FS CPI EPI  
FA AB; GI  
MC CPI: L03-E01D3  
EPI: X16-F01A

L33 ANSWER 11 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-304752 [30] WPIX

DNN N2003-242484

TI Battery mounting structure of fuse box used in motor vehicle, fixes clamp of battery terminal to battery post after fixing battery terminal to terminal piece using nut.

DC V04 X16 X22

PA (SUME) SUMITOMO DENSO KK

CYC 1

PI JP 2002358868 A 20021213 (200330)\* 12p H01H085-25

ADT JP 2002358868 A JP 2001-164805 20010531

PRAI JP 2001-164805 20010531

IC ICM H01H085-25

ICS H01M002-34; H05K007-12

AB JP2002358868 A UPAB: 20030513

NOVELTY - A battery terminal (30) has a clamp (31) that is fixed to a battery post after fixing the battery terminal to a terminal piece (18) by screwing a nut into the attachment hole of the terminal piece.

USE - For mounting battery used in motor vehicles.

ADVANTAGE - The battery is mounted onto the fuse box easily and efficiently.

DESCRIPTION OF DRAWING(S) - The figure shows the partially notched side-view of temporary-assembling operation of battery mounting structure. (Drawing includes non-English language text).

Terminal piece 18

Battery terminal 30

Clamp 31

Dwg.8/15

FS EPI  
FA AB; GI  
MC EPI: V04-T01; X16-F03; X22-F01

L33 ANSWER 12 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2002-755855 [82] WPIX

DNN N2002-595655

TI Battery holder for accommodating button-type battery, has tongue formed by turning tip of arms towards support unit and elastically attached to small diameter portion of battery.

DC V04 X16

PA (ALPS) ALPS ELECTRIC CO LTD

CYC 1

PI JP 2002313297 A 20021025 (200282)\* 6p H01M002-10

ADT JP 2002313297 A JP 2001-110505 20010409

PRAI JP 2001-110505 20010409

IC ICM H01M002-10

AB JP2002313297 A UPAB: 20030121

NOVELTY - A support unit (13) is attached to the battery holder bottom portion. Arms (14,15) are provided protruding from the support unit in the direction of intersecting the radial direction. Tongue (18) formed by turning the tip of the arms towards the support unit, is elastically attached to the small diameter portion of the battery.

USE - Battery holder for accommodating button-type battery in various electronic devices such as mobile telephone and camera.

ADVANTAGE - Minimizes the area occupied by the base terminal in the bottom board, improves freedom in designing the **battery** holder, simplifies **assembly** and achieves cost reduction.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of the **notched** surrounding wall of the battery holder.

Support unit 13

Arms 14,15

Tongue 18

Dwg.2/9

FS EPI

FA AB; GI

MC EPI: V04-S03; X16-F06

L33 ANSWER 13 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:305670 CAPLUS

ED Entered STN: 01 May 2001

TI **Battery**, tray and heat shield **assembly**

IN Brouns, Daniel Robert; Mc, Vey Harry Daniel; Litton, Burdis H.

PA Delphi Technologies, Inc., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM H01M002-00

NCL 429100000; 429096000; 429163000

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6224998	B1	20010501	US 1999-243947	19990204
PRAI	US 1999-243947		19990204		

AB An electrical storage battery is supported on a tray which is secured to a frame member. The tray and battery have interlocking **notches** which maintain the battery relative to the tray. A heat shield is positioned to cover the battery and secured to the tray. The securement structure includes a slot in the tray, retaining tab on the heat shield and a retaining clip. The retaining tab is inserted in the slot in the tray. The retaining clip passes through a slot on the heat shield and engages the slot in the tray to restrict movement of the retaining tab. The periphery of the heat shield is supported on three sides in grooves on the tray.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Chambers; US 4350746 1982

KOROMA EIC1700

- (2) McCormick; US 5660945 1997
- (3) Nitcher; US 4756978 1988

L33 ANSWER 14 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:467908 CAPLUS  
 DN 135:35231  
 ED Entered STN: 28 Jun 2001  
 TI Lithium secondary **battery** and procedure for their fabrication  
 IN Hong, Ji Jun  
 PA Kokam Engineering Co., Ltd., S. Korea  
 SO Ger. Offen., 6 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM H01M010-04  
 ICS H01M010-39  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10010845	A1	20010628	DE 2000-10010845	20000306
	JP 2001229979	A2	20010824	JP 2000-59430	20000303
	JP 3358807	B2	20021224		
	CN 1301053	A	20010627	CN 2000-103329	20000306
	FR 2802707	A1	20010622	FR 2000-2887	20000307
	CZ 290608	B6	20020814	CZ 2000-1956	20000526
	RU 2175800	C1	20011110	RU 2000-114235	20000607
	BR 2000002362	A	20010911	BR 2000-2362	20000619
	US 2003008206	A1	20030109	US 2002-162542	20020603
PRAI	KR 1999-59182	A	19991220		
	US 2000-518277	A1	20000303		

AB A lithium secondary cell has a plurality of **cathode** plates with a pre-determined **size** on a surface of the **separator** film brought adhering in even distance from each other and a plurality of **anode** plates with a pre-determined **size** on the opposite surface of the **separator** film in standing apart positions corresponding to the **cathode** plates. The **separator** film with the adhering **anode** plates and **cathode** plates is **folded** repeatedly, in such a manner that the **anode** plates and **cathode** plates are arranged in an alternating way. The lithium secondary cell possesses an improved efficiency and a special safety, since burning-through is prevented.

ST lithium secondary **battery** fabrication; safety lithium secondary **battery**

IT Secondary **battery separators**  
 (lithium secondary **battery** and procedure for their fabrication)

IT Secondary **batteries**  
 (lithium; lithium secondary **battery** and procedure for their fabrication)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
 RL: DEV (Device component use); USES (Uses)



(lithium secondary **battery** and procedure for their fabrication)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Anon; EP 0602976 A1 CAPLUS
- (2) Anon; EP 0682376 A1 CAPLUS
- (3) Anon; DE 19540845 A1 CAPLUS

L33 ANSWER 15 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
AN 2001-270303 [28] WPIX  
DNN N2001-193935

TI Group **battery assembly** with valve control type lead  
batteries for engine start-up of motor vehicle, has anode and cathode  
terminals provided to **notches** formed on corners of batteries,  
connected to plug.

DC X16

PA (YUAS) YUASA CORP KK

CYC 1

PI JP 2001057227 A 20010227 (200128)\* 4p H01M010-06

ADT JP 2001057227 A JP 1999-232277 19990819

PRAI JP 1999-232277 19990819

IC ICM H01M010-06

AB JP2001057227 A UPAB: 20010522

NOVELTY - The anode terminals (1,3) and cathode terminals (2,4) are  
provided in the **notches** (6,5) formed on corners of batteries  
(A,B), are connected to plug (7) comprising three or four terminals.

USE - For engine start-up of motor vehicle and for supplying electric  
power to the apparatus in motor vehicle.

ADVANTAGE - Since the projection of the terminals from periphery of  
group battery is prevented, space reduction is attained. Prevents short  
circuit during operation. Enables correct connection with exterior line,  
easily.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of  
group battery.

Anode terminals 1,3

Cathode terminals 2,4

**Notches** 5,6

Plug 7

Batteries A,B

Dwg.1/3

FS EPI

FA AB; GI

MC EPI: X16-B01B

L33 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:646296 CAPLUS  
DN 133:225586

ED Entered STN: 15 Sep 2000

TI Air-assisted alkaline **battery** construction

IN Urry, Lewis F.

PA Eveready Battery Company, Inc., USA

SO PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM H01M012-06

ICS H01M006-10

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000054360	A2	20000914	WO 2000-US6056	20000308
	WO 2000054360	A3	20010517		
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	US 6383674	B1	20020507	US 1999-266292	19990311
	TW 431006	B	20010421	TW 1999-88106369	19990421
	EP 1166383	A2	20020102	EP 2000-914872	20000308
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRAI	US 1999-266292	A	19990311		
	WO 2000-US6056	W	20000308		
AB	<p>An electrochem. cell is disclosed including a cell housing, an ion-permeable, oxygen transmission restricting membrane that divides the interior of the cell housing into a first portion exposed to ambient air and a substantially air-tight second portion, an air electrode provided in contact with the membrane within the first portion of the cell housing interior that reoxidizes when exposed to ambient air, and a working cell provided in the substantially air-tight second portion of the cell housing interior. The working cell includes a <b>pos. electrode</b>, a <b>neg. electrode</b>, and an electrolyte. The <b>pos. electrode</b> is in contact with the membrane and is made of an electrochem. active material that is the same material that is used in the air electrode, such that the air <b>electrode</b> supplies ions to the <b>pos. electrode</b> to thereby reoxidize the <b>pos. electrode</b> as it discharges without exposing the <b>neg. electrode</b> or the <b>pos. electrode</b> of the working cell to oxygen from the surrounding air. Also disclosed is a spiral-wound electrode assembly that may be used with or apart from the above electrochem. cell. The spiral-wound electrode assembly includes wound <b>strips</b> of a <b>pos. electrode</b>, a <b>neg. electrode</b>, and a <b>separator</b>. The spiral-wound electrode assembly further includes a spacer for maintaining a space between the wound <b>strips</b> of <b>neg.</b> and <b>pos. electrodes</b> for collection and retention of reaction product produced during cell discharge. Preferably, the spacer is formed by alternately <b>folded</b> tabs provided along edges of one of the</p>				

electrode strips.  
 ST battery construction air assisted; zinc manganese dioxide air assisted alk battery  
 IT Primary batteries  
     (air-assisted alkaline battery construction)  
 IT Cellophane  
     (separator; air-assisted alkaline battery construction)  
 IT Zinc alloy, base  
     RL: DEV (Device component use); USES (Uses)  
         (air-assisted alkaline battery construction)  
 IT 1310-58-3, Potassium hydroxide, uses 1313-13-9, Manganese dioxide, uses 7440-66-6, Zinc, uses  
     RL: DEV (Device component use); USES (Uses)  
         (air-assisted alkaline battery construction)  
 IT 7782-42-5, Graphite, uses  
     RL: MOA (Modifier or additive use); USES (Uses)  
         (air-assisted alkaline battery construction)

L33 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:210575 CAPLUS  
 DN 132:224889  
 ED Entered STN: 31 Mar 2000  
 TI Improved process for manufacturing batteries  
 IN Xie, Like; Roberts, Thomas J.; Kaganovich, Steve; Zhang, Zhiwei; Alamgir, Mohammed  
 PA Thomas & Betts International, Inc., USA  
 SO PCT Int. Appl., 20 pp.  
     CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM H01M006-10  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
     Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000017950	A1	20000330	WO 1999-US22381	19990924
	W: CA, CN, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1116290	A1	20010718	EP 1999-948482	19990924
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6287721	B1	20010911	US 1999-405200	19990924
	JP 2002525823	T2	20020813	JP 2000-571512	19990924
PRAI	US 1998-101589P	P	19980924		
	WO 1999-US22381	W	19990924		

AB A manifold bicell assembly for electrochem. cells such as a polymer lithium ion battery is provided along with a method of manufacture thereof. The disclosed electrochem. cell includes an elongated planar separator or substrate formed of an elastic material. A plurality of discrete anodes is positioned in

longitudinally spaced apart relationship to one another and positioned between a pair of substrates to create a sandwich **assembly** wherein adjacent **anodes** have a substrate interface there-between. A plurality of **cathodes** corresponding in **size**, shape and number to the plurality of **anodes** is also positioned in longitudinally spaced apart relationship on an opposed side of the substrate in alignment with the **anodes**. The substrate is **folded** along its interfaces to create a manifold **assembly** of alternately stacked **anodes** and **cathodes**.

ST lithium ion polymer **battery**

IT Carbon black, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(improved process for **manufacturing batteries**)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(improved process for **manufacturing batteries**)

IT Secondary **batteries**

(lithium; improved process for **manufacturing batteries**)

IT 7782-42-5, Graphite, uses 12190-79-3, Cobalt lithium oxide colio2

RL: DEV (Device component use); USES (Uses)  
(improved process for **manufacturing batteries**)

IT 84-74-2, Dibutyl phthalate 9011-14-7, Pmma 9011-17-0,

Hexafluoropropylene-vinylidene fluoride copolymer 24937-79-9, PvdF

RL: TEM (Technical or engineered material use); USES (Uses)  
(improved process for **manufacturing batteries**)

IT 7429-90-5, Aluminum, uses 7440-50-8, Copper, uses

RL: DEV (Device component use); USES (Uses)  
(mesh; improved process for **manufacturing batteries**)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Dasgupta; US 5498489 A 1996 CAPLUS

(2) Kawakami; US 5582931 A 1996 CAPLUS

(3) Kraft; US 5776628 A 1998

(4) Mitchell; US 5911947 A 1999 CAPLUS

(5) Muffoletto; US 5716735 A 1998

(6) Muffoletto; US 5744261 A 1998 CAPLUS

(7) Parkinson; US 4192049 A 1980 CAPLUS

(8) Reddy; US 5525441 A 1996 CAPLUS

(9) Shackle; US 5300373 A 1994 CAPLUS

L33 ANSWER 18 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:665866 CAPLUS

DN 133:269431

ED Entered STN: 22 Sep 2000

TI Laminate-type electric **battery**

IN Ito, Yuichi; Masaki, Hideyuki; Watanabe, Goro; Nakano, Akira; Nozaki, Osamu; Takeuchi, Tomoyasu

PA Toyota Central Research and Development Laboratories, Inc., Japan; Toyota Motor Corp.; Denso Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese  
 IC ICM H01M002-26  
 ICS H01M002-22; H01M010-40  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000260417	A2	20000922	JP 1999-65495	19990311
PRAI	JP 1999-65495		19990311		

AB In a laminate-type **battery** comprising **pos.** sheet **electrode** and **neg.** sheet **electrode** laminated together and separated with a **separator**, the section on each sheet where no laminate is formed is **folded** in the direction parallel to the end face of the laminate electrode body and the **foldings** are superimposed and bonded together to form a plate-shaped elec. terminal component. A **battery** of small **size** with high energy d. and output d. is provided.

ST laminate secondary **battery**

IT Secondary **batteries**

(laminated; construction of laminate-type elec. **battery**)

L33 ANSWER 19 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:448379 CAPLUS

DN 133:61348

ED Entered STN: 05 Jul 2000

TI **Manufacture** of alkaline secondary **battery**

**cathode** plates and alkaline secondary **batteries**

IN Furuya, Satoshi; Asano, Gota; Miyahisa, Masaharu; Masui, Motohide

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM H01M004-32

ICS H01M010-30

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000188104	A2	20000704	JP 1998-362641	19981221
PRAI	JP 1998-362641		19981221		

AB The **cathode** is **manufactured** by filling the pores of sponge metal with Ni hydroxide paste by jetting, **cutting** the metal, and polishing the burr generated during **cutting** of the sponge. Burr is polished to  $\leq 20$   $\mu$ m length with a **notched** rotating polisher. Alkaline secondary **batteries** comprising the above **manufactured cathodes** are also claimed. Damaging of **separators** by the **cathode** burrs are prevented.

ST alk secondary **battery** nickel hydroxide **cathode**; burr polish removal sponge metal **cathode**

IT **Cutting**

(burr generated by; polish removal of burr from nickel hydroxide-containing

sponge metal **cathodes** for alkaline secondary **batteries**)  
 IT **Battery cathodes**  
 Polishing  
 (polish removal of burr from nickel hydroxide-containing sponge metal **cathodes** for alkaline secondary **batteries**)  
 IT Porous materials  
 (sponge metals; polish removal of burr from nickel hydroxide-containing sponge metal **cathodes** for alkaline secondary **batteries**)  
 IT 12054-48-7, Nickel hydroxide (Ni(OH)<sub>2</sub>)  
 RL: **DEV (Device component use)**; PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (polish removal of burr from nickel hydroxide-containing sponge metal **cathodes** for alkaline secondary **batteries**)

L33 ANSWER 20 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:130003 CAPLUS  
 DN 132:154435  
 ED Entered STN: 25 Feb 2000  
 TI **Manufacture of secondary nonaqueous electrolyte batteries**  
 IN Kusakabe, Tetsuya  
 PA Kao Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM H01M010-40  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000058129	A2	20000225	JP 1998-226763	19980811
PRAI	JP 1998-226763		19980811		

AB **Secondary Li batteries** are prepared by using a **foldable** tool, having a v shaped structure between 2 flat parts, by: successively placing a **cathode** collector, a **cathode**, and a **separator** on 1 flat part; successively placing a **separator**, an **anode**, and an **anode** collector on the other flat part; **folding** the tool; **cutting** off the part of the **battery** members protruded from the tool; removing the tool; and inserting the electrode/**separator** assembly in **battery** case.

ST secondary lithium **battery** manuf

IT **Secondary batteries**  
 (lithium; **manufacture of secondary lithium batteries**)

L33 ANSWER 21 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
 AN 2001-101429 [11] WPIX  
 DNN N2001-075236  
 TI Tray for holding battery in vehicle, has hold down projections and stanchion with ribs having **notches** engages with battery projections and battery handle.

DC X16 X22  
IN BRANTLEY, R F; CARTER, D E  
PA (DELP-N) DELPHI TECHNOLOGIES INC  
CYC 1  
PI US 6153331 A 20001128 (200111)\* 7p H01M002-10  
ADT US 6153331 A US 1999-311713 19990514  
PRAI US 1999-311713 19990514  
IC ICM H01M002-10  
AB US 6153331 A UPAB: 20010224

NOVELTY - Battery has hold down extensions (34,42) engaged with tray's projections (22). A retention lip (26) pivotally mounts battery handle with **notches** (70) to hold cables (74,76) which engages in the **notches** (32). The **notches** are formed in the ribs (30) of stanchion (28) formed on the tray.

USE - For holding battery in vehicle.

ADVANTAGE - The tray projections engages with battery projections which replaces the requirement of the fasteners, by which **assembling** and dismantling of **battery** is made easier and thereby offers time saving. The battery handle has **notches** to hold cables. The battery handle engages with the **notches** of the ribs of the vertical stanchion to limit horizontal movement. So the battery is secured in the tray both vertically and horizontally.

DESCRIPTION OF DRAWING(S) - The figure shows the isometric view of battery installed in a tray.

Projections 22

Retention lip 26

Stanchion 28

Ribs 30

**Notches** 32,70

Hold down extensions 34,42

Cables 74,76

Dwg.2/4

FS EPI  
FA AB; GI  
MC EPI: X16-F06; X22-F01

L33 ANSWER 22 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
AN 2000-597822 [57] WPIX  
DNN N2000-442915

TI Battery pack attachment structure for portable telephone, has magnetic inside case, to receive battery pack with **notches** at sides of pack for receiving detachment tool.

DC W01 X16  
PA (TOKA-N) TOKADO KK  
CYC 1

PI JP 2000243367 A 20000908 (200057)\* 4p H01M002-10  
ADT JP 2000243367 A JP 1999-44882 19990223  
PRAI JP 1999-44882 19990223  
IC ICM H01M002-10  
AB JP2000243367 A UPAB: 20001109

NOVELTY - The battery is enclosed in a pack (2). The battery pack is received in the main case (1) of electronic device through adsorbing power

of magnets (6,7) in the case. **Notches** for receiving the detachment tool are provided at sides of pack.

USE - For portable telephone and other electronic devices.

ADVANTAGE - Anti-skid property is raised at the time of usage due to provision of **notches**.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of **battery pack assembly**.

Main case 1

Pack 2

Magnets 6,7

Dwg.1/3

FS EPI

FA AB; GI

MC EPI: W01-C01D3B; W01-C01E5B; X16-F06

L33 ANSWER 23 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-507804 [46] WPIX

DNN N2000-375556 DNC C2000-152319

TI Lithium secondary battery has case which is laminate of polymeric film layer from which metallic foil is taken out, wound along case surface and fixed on thermobonding part of case.

DC A85 L03 X16

PA (MITU) MITSUBISHI CHEM CORP

CYC 1

PI JP 2000156218 A 20000606 (200046)\* 10p H01M002-30

ADT JP 2000156218 A JP 1998-330627 19981120

PRAI JP 1998-330627 19981120

IC ICM H01M002-30

ICS H01M002-02; H01M002-06; H01M010-40

AB JP2000156218 A UPAB: 20000921

NOVELTY - Lithium secondary battery containing an electrolyte layer interposed between anode and cathode is enclosed in a case (5) which is a laminate of polymeric film layer having thermobonding property. Metallic foil (13,23) of 15-100  $\mu$ m thickness taken as a **lead** from the exterior of case is **folded** along the case surface and fixed on a thermobonding part (51) of the case and used as external terminal.

USE - For power supply.

ADVANTAGE - Battery with excellent volume capacitance and weight capacitance is provided. The connection of battery with charging and discharging controlling circuit is made easy. The thermobonding part fixed with metallic foil is more rigid than the laminate film. The position stability of external terminal is improved. The metallic foil is used as an external terminal, therefore the need of attaching a new external terminal is avoided. The polymeric film layer of the battery case prevents permeation of water and air. The cutting of external terminal due to vibration and shock during usage, is prevented.

DESCRIPTION OF DRAWING(S) - The figure shows the **assembly** of lithium secondary **battery**.

Case 5

Metallic foil 13,23

Thermobonding part 51

Dwg.3/8



FS CPI EPI  
FA AB; GI  
MC CPI: A12-E06C; L03-E01D  
EPI: X16-B01F; X16-F01

L33 ANSWER 24 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-434937 [38] WPIX

CR 1994-068427 [09]; 2000-434935 [37]; 2000-434936 [37]

DNN N2000-324977

TI Solar battery module for mounting in building, has several solar battery units sealed between front lamination sheet and rear lamination coated with non-curing pipe hot melt adhesive.

DC Q45 U12

PA (CANO) CANON KK

CYC 1

PI JP 2000150949 A 20000530 (200038)\* 25p H01L031-042

ADT JP 2000150949 A Div ex JP 1992-191363 19920626, JP 2000-3009 19920626

PRAI JP 1992-191363 19920626; JP 2000-3009 19920626

IC ICM H01L031-042

ICS E04D013-00; E04D013-18; H01L031-04

AB JP2000150949 A UPAB: 20000811

NOVELTY - Several solar **battery** units (401) are **assembled** on flexible substrate with individual output **leads**. The assembly is enclosed between front lamination sheet (403) having an area larger than that of batteries and rear lamination sheet (404). Rear lamination sheet is coated with non-curing type hot melt adhesive (405). The adhesive is then cured by heating and is adhered to building surface.

USE - For installation in roof of buildings. Also for storage battery charging system.

ADVANTAGE - As solar battery module is flexible without support structure, it can be **folded** and can be handled easily even if the size is large. The module can be easily aligned and fitted simply, just by heat application.

DESCRIPTION OF DRAWING(S) - The figure shows components of solar battery module.

Solar battery unit 401

Front lamination sheet 403

Rear lamination sheet 404

Adhesive 405

Dwg.1/28

FS EPI GMPI

FA AB; GI

MC EPI: U12-A02A5

L33 ANSWER 25 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-229598 [20] WPIX

DNN N2000-172806

TI Cap **assembly** of secondary **battery**, has **notches** provided to surroundings of bridge where plate equipped with safety valve is fixed strongly to lead.

DC X16

IN HWANG, Y J; KIM, H S; SONG, M G; HWANG, E; KIM, H; SONG, M  
PA (SMSU) SAMSUNG DENKAN KK; (SMSU) SAMSUNG SDI CO LTD  
CYC 3  
PI JP 2000048801 A 20000218 (200020)\* 6p H01M002-34  
KR 2000009698 A 20000215 (200065) H01M002-10  
US 6346344 B1 20020212 (200219) H01M002-34  
ADT JP 2000048801 A JP 1999-168468 19990615; KR 2000009698 A KR 1998-30289  
19980728; US 6346344 B1 US 1999-323529 19990601  
PRAI KR 1998-30289 19980728  
IC ICM H01M002-10; H01M002-34  
ICS H01M002-12; H01M010-40  
AB JP2000048801 A UPAB: 20000426  
NOVELTY - The plate (14) equipped with safety valve and lead (82) is  
provided at the bottom side of the battery. **Notches** (820) are  
provided to the surroundings of the bridge, where the plate is fixed to  
the lead. DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for  
battery lead.  
USE - For secondary battery like nickel hydrogen battery, lithium  
battery and lithium ion battery.  
ADVANTAGE - The manufacturing process is made easy and dependability  
of plate equipped with lead and safety valve is raised. Thus, desired  
safety against heat generation and firing of battery is achieved.  
DESCRIPTION OF DRAWING(S) - The figure shows a sectional diagram of cap  
**assembly of secondary battery.** (14) Plate; (82) Lead;  
(820) Notch.  
Dwg.1/6  
FS EPI  
FA AB; GI  
MC EPI: X16-B01F; X16-F03; X16-F03B  
L33 ANSWER 26 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
AN 2000-273654 [24] WPIX  
DNN N2000-205156 DNC C2000-083627  
TI **Lead acid storage battery with ribbed bag-like separator for use**  
in cars has a grid filled with a paste of active material, accommodated in  
a bag-like separator.  
DC L03 M26 X16  
IN MUROCHI, S; OKAMOTO, H; YONEZU, K  
PA (MATU) MATSUSHITA ELECTRIC IND CO LTD; (MATU) MATSUSHITA DENKI SANGYO KK;  
(MATU) MATSUSHITA ELECTRIC SANGYO KK  
CYC 28  
PI EP 994518 A1 20000419 (200024)\* EN 17p H01M002-18  
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI  
JP 2000173575 A 20000623 (200036) 9p H01M002-18  
KR 2000023057 A 20000425 (200107) H01M010-14  
EP 994518 B1 20010704 (200138) EN H01M002-18  
R: DE FR GB  
DE 69900175 E 20010809 (200153) H01M002-18  
KR 311945 B 20011103 (200240) H01M010-14  
US 6475665 B1 20021105 (200276) H01M002-18  
ADT EP 994518 A1 EP 1999-118483 19990917; JP 2000173575 A JP 1999-259580

19990913; KR 2000023057 A KR 1999-38555 19990910; EP 994518 B1 EP  
1999-118483 19990917; DE 69900175 E DE 1999-600175 19990917, EP  
1999-118483 19990917; KR 311945 B KR 1999-38555 19990910; US 6475665 B1 US  
1999-398581 19990917

FDT DE 69900175 E Based on EP 994518; KR 311945 B Previous Publ. KR 2000023057  
PRAI JP 1998-280803 19981002; JP 1998-264650 19980918

IC ICM H01M002-18; H01M010-14

ICS H01M004-68; H01M004-73; H01M004-74; H01M010-06

AB EP 994518 A UPAB: 20000522

NOVELTY - The battery separator (1) is formed by **folding** a fine porous resin sheet and sealing left and right overlapping sides to give a bag-like shape, the separator having parallel vertical ribs (3) on the outer surface and small rib areas (5) on the left and right sides.

DETAILED DESCRIPTION - A **lead storage battery** comprises an **assembly** element with a number of anode plates (4) and cathode plates (2) stacked alternately. Each cathode plate is accommodated in the bag-like separator (1). The vertical ribs (3) are located in a central part of the separator occupying most of its width. The small rib areas (5) include a large number of small ribs (5a) that intersect a left or right side of the anode plate.

USE - For **lead acid storage batteries** for cars.

ADVANTAGE - Active material is prevented from falling off an anode plate. Life cycle of the **lead acid battery** is improved under high vibrating conditions.

DESCRIPTION OF DRAWING(S) - The figure shows a front view of a bag-like separator.

battery separator 1

cathode plates 2

parallel vertical ribs 3

anode plates 4

small ribs areas 5

small ribs 5

Dwg.1/10

FS CPI EPI

FA AB; GI

MC CPI: L03-E01A; M26-B04; M26-B04C; M26-B04T  
EPI: X16-B01B; X16-F02

L33 ANSWER 27 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:690279 CAPLUS

DN 131:288885

ED Entered STN: 29 Oct 1999

TI **Batteries** with external casing comprising laminated sheets

IN Ogawa, Masahiko; Mino, Shinji; Yoshihara, Yasuo; Eda, Nobuo

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM H01M002-02

ICS H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

## Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11297280	A2	19991029	JP 1998-244614	19980831
PRAI	JP 1998-28838		19980210		
AB	Sheet <b>batteries</b> comprising a laminated electrode (a unified laminate of <b>cathode, separator, and anode</b> ) sealed with a pair of laminate sheets (e.g. laminate of an elec. insulation polymer film and a gas-shielding metal film) with covering the laminated electrode cross-cut ends are claimed. The ends may be covered by <b>folding</b> back the laminate sheets. The laminated electrodes may comprise a porous polymer <b>separator</b> which absorbs organic electrolyte sandwiched between a pair of electrodes consisting of electrode collectors supporting a mixed active material layers and a mixed active material layers containing polymers which absorb organic electrolyte solns. Scattering of electrolyte is prevented.				
ST	polymer metal laminate sealed sheet <b>battery</b> ; secondary lithium sheet sealed <b>battery</b>				
IT	Metals, uses RL: <b>DEV (Device component use); USES (Uses)</b> (laminates with polymer films; sheet <b>batteries</b> sealed with polymer laminates)				
IT	Secondary <b>batteries</b> (lithium; sheet <b>batteries</b> sealed with polymer laminates)				
IT	Laminated materials (metal-plastic; sheet <b>batteries</b> sealed with polymer laminates)				
IT	Secondary <b>batteries</b> (sealed; sheet <b>batteries</b> sealed with polymer laminates)				
IT	Laminated plastic films (sheet <b>batteries</b> sealed with polymer laminates)				
L33	ANSWER 28 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN				
AN	1999-383887 [32] WPIX				
DNN	N1999-287385				
TI	Latching <b>assembly</b> of <b>battery</b> attachment device.				
DC	T01 V04 W01 W02 W05 X16				
IN	BARBER, J; GROEBE, D P; STONE, F H; BARBER, J H				
PA	(MOTI) MOTOROLA INC				
CYC	4				
PI	US 5909102	A	19990601 (199932)*	14p	H01M010-46
	GB 2335461	A	19990922 (199941)		H01M002-10
	CN 1227981	A	19990908 (199954)		H01R033-00
	BR 9900109	A	19991221 (200017)		H04Q007-32
ADT	US 5909102 A US 1998-10101 19980121; GB 2335461 A GB 1999-900 19990118; CN 1227981 A CN 1999-101327 19990120; BR 9900109 A BR 1999-109 19990119				
PRAI	US 1998-10101 19980121				
IC	ICM H01M002-10; H01M010-46; H01R033-00; H04Q007-32				
	ICS H01M002-20; H01R013-00				
AB	US 5909102 A UPAB: 19990813 NOVELTY - <b>Notches</b> (214,215) having different depths are formed				

on the primary latch detachably mounted in rectangular housing (202). Several L-shaped contacts (218-222) are engaged with respective openings (224-227) in the housing. Several catches (242) formed on the ends of secondary latch, engage with respective **notches**.

DETAILED DESCRIPTION - The height of depth in the notch (215) is set twice that of the notch (214). By using both latches, the battery is mounted in the device housing.

USE - For battery attachment device used for attaching battery in radio telephone, pager, personal digital assistant, cordless telephone, laptop computers, portable cassette recorders and players, two-way radio, etc.

ADVANTAGE - By ensuring engagement between contacts and openings, the battery is secured with latches, easily. The electrical connection between battery and electronic device is ensured without battery cover, as perfect latch and contact engagement is assured.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of electronic device with latch and cover arrangement of battery.  
Housing 202

Notches 214,215

L- shaped contacts 218-222

Openings 224-227

Catches 242

Dwg.2/8

FS EPI

FA AB; GI

MC EPI: T01-L01; T01-L02; T01-M06A1; V04-A04C; V04-S03; W01-C01A1;  
W01-C01D3C; W01-C01E5B; W02-G02A1; W02-G02H; W05-A05C1; X16-F05;  
X16-F06

L33 ANSWER 29 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-004912 [01] WPIX

DNN N2000-004358

TI Cover fixing method for airtight lead storage battery -  
involves returning hinge of cover to normal state to fix cover in  
injecting nozzle after removal of residual electrolyte.

DC X16

PA (YUAS) YUASA CORP KK

CYC 1

PI JP 11283661 A 19991015 (200001)\* 3p H01M010-12

ADT JP 11283661 A JP 1998-83680 19980330

PRAI JP 1998-83680 19980330

IC ICM H01M010-12

AB JP 11283661 A UPAB: 20000105

NOVELTY - The cover (5) is temporarily fixed in an injecting nozzle (3) through which electrolyte is injected into a case (1). The hinge (51) of the cover is folded upward and the electrolyte in the cover is removed from the gap between the nozzle and cover. The hinge is returned to normal state after removal of electrolyte and cover is fixed firmly.  
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for airtight lead storage battery.

USE - For fixing cover to injecting nozzle during manufacture of airtight lead storage battery.

ADVANTAGE - Facilitates usage of injecting nozzle as exhaust port during formation of **battery**. Improves efficiency of **battery assembly** process by completing sealing of injecting nozzle by cover. Reduces cost of battery by avoiding need for sealing unit for temporal seal stopping. DESCRIPTION OF DRAWING(S) - The figure shows perspective diagram of formation process of airtight **lead** storage battery. (1) Case; (3) Injecting nozzle; (5) Cover; (51) Hinge.

Dwg.1/2

FS EPI  
FA AB; GI  
MC EPI: X16-B01B

L33 ANSWER 30 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1999-447138 [38] WPIX

DNN N1999-333664

TI Case of airtight battery of electric vehicles - has tubular body and cover that has **notches** which fit into tubular body aperture edge forming connection which is laser welded.

DC Q13 X16 X21

PA (KOBM) KOBE STEEL LTD; (ALUM) SHINKO ALCOA YUSO KIZAI KK; (TOYT) TOYOTA JIDOSHA KK

CYC 1

PI JP 11162419 A 19990618 (199938)\* 6p H01M002-02

ADT JP 11162419 A JP 1997-330658 19971201

PRAI JP 1997-330658 19971201

IC ICM H01M002-02

ICS B60K001-04

AB JP 11162419 A UPAB: 19990922

NOVELTY - The case has a tubular body (1) provided with a cover (2). The cover has a notch (2b) at its edge, that fits to the inner surface of an aperture edge (1a) in the tubular body. The connection of the cover and tubular body, both of which consist of aluminum alloy, is laser welded. DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for method of **assembling** the case for airtight **battery**.

USE - For electric vehicles.

ADVANTAGE - Ensures flawless welding as the notch in the cover fits into the mainbody aperture edge. DESCRIPTION OF DRAWING(S) - The figure shows the magnified sectional view of the connection of the case body and cover. (1) Tubular body; (1a) Aperture edge; (2) Cover; (2b) Notch.

Dwg.2/5

FS EPI GMPI  
FA AB; GI  
MC EPI: X16-F01A; X21-A01F; X21-B01A

L33 ANSWER 31 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1999-196136 [17] WPIX

DNN N1999-144403 DNC C1999-057520

TI Plate assembly manufacture for storage batteries - involves forming mutually lapping assembly of two plates after forming separator layer over one of them.

DC L03 X16

IN CHANG, G W; HONG, U S; HWANG, Y J; KIM, C S; KIM, H W  
 PA (SMSU) SAMSUNG DENKAN KK; (SMSU) SAMSUNG DISPLAY DEVICES CO LTD  
 CYC 2  
 PI JP 11040202 A 19990212 (199917)\* 4p H01M010-40  
 KR 99011490 A 19990218 (200016) H01M006-44  
 ADT JP 11040202 A JP 1998-34624 19980217; KR 99011490 A KR 1997-34594 19970723  
 PRAI KR 1997-34594 19970723  
 IC ICM H01M006-44; H01M010-40  
 ICS H01M002-22  
 AB JP 11040202 A UPAB: 19990503

NOVELTY - A separator (23) is formed over a plate (22). Subsequently another plate (21) is aligned at right angle to the edge of the plate (22). This is followed by folding the plate (21) such that two plates lap each other.

USE - For storage batteries used as power supply in video camera, cellular phone, lap-top computer.

ADVANTAGE - Increases battery capacity since volume occupied by the plate member increases to the maximum.

DESCRIPTION OF DRAWING - The drawing shows **notched** isometric view of plate assembly. (21,22) Plates; (23) Separator.  
 Dwg.3/4

FS CPI EPI  
 FA AB; GI  
 MC CPI: L03-E01D  
 EPI: X16-E01G; X16-E02

L33 ANSWER 32 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:723790 CAPLUS  
 DN 130:5710  
 ED Entered STN: 16 Nov 1998  
 TI Very thin solid state lithium **batteries** and their

**manufacture**

IN Gauthier, Michel; Lessard, Ginette; Vassort, Guy; Bouchard, Patrick;  
 Vallee, Alain; Perrier, Michel  
 PA Hydro-Quebec, Can.  
 SO Eur. Pat. Appl., 26 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA French  
 IC ICM H01M010-40  
 ICS H01M010-04  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 875952	A1	19981104	EP 1998-201306	19980423
	EP 875952	B1	20011024		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2203490	AA	19981023	CA 1997-2203490	19970423
	CA 2203869	AA	19981028	CA 1997-2203869	19970428
	CA 2235884	AA	19981023	CA 1998-2235884	19980423

	JP 11097065	A2	19990409	JP 1998-151857	19980423
	US 6030421	A	20000229	US 1998-64821	19980423
PRAI	CA 1997-2203490	A	19970423		
	CA 1997-2203869	A	19970428		

AB The **battery** is **manufactured** from a thin layered film structure, e.g., of Ni/Li/polymeric electrolyte/composite **cathode** /Al, with total thickness of approx. 100  $\mu$ m. The composite **cathode** contains, e.g., V oxide, carbon black, and polymeric binder. The electrolyte comprises a conducting salt, e.g., Li bis(trifluoromethanesulfonyl)imide, in a patented polyethylene oxide **separator**. The layers of the **battery** are **assembled** in series (or parallel) by coating and film transfer. The outer metallic films are supplied on a polymer film support, e.g., polyethylene or polypropylene, which is removed after **assembly** by peeling off. The **assembled** layered structure is treated by blanking, crush **cutting** or score **cutting**. The layered structure can be **folded** and stacked and exhibits self-healing properties (at the free edges).

ST lithium **battery** thin solid state

IT Secondary **batteries**  
(lithium; very thin solid state lithium **batteries** and their **manufacture**)

IT Adhesives  
Solid state secondary **batteries**  
(very thin solid state lithium **batteries** and their **manufacture**)

IT Borides  
Carbides  
Carbon black, uses  
EPDM rubber  
Fluoropolymers, uses  
Nitrides  
Polyoxyalkylenes, uses  
Polyurethanes, uses  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(very thin solid state lithium **batteries** and their **manufacture**)

IT 96-49-1, Ethylene carbonate 623-53-0, Ethyl methyl carbonate 1314-62-1, Vanadium oxide, uses 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7439-93-2, Lithium, uses 7440-02-0, Nickel, uses 7440-23-5, Sodium, uses 7440-44-0, Carbon, uses 9002-88-4, Polyethylene 9003-07-0, Polypropylene 21324-40-3, Lithium hexafluorophosphate 24937-79-9, PVDF 25322-68-3, Polyethylene oxide 36446-03-4, Methyl methacrylate-pentaerythritol tetraacrylate copolymer 90076-65-6, Lithium bis(trifluoromethanesulfonyl)imide 111804-95-6  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(very thin solid state lithium **batteries** and their **manufacture**)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE



- (1) Bell Communications Res; WO 9515589 A 1995 CAPLUS
- (2) Brother Ind Ltd; JP 01276567 A 1989
- (3) Electro Chem Res; WO 9507555 A 1995 CAPLUS
- (4) Elf Aquitaine; WO 9111287 A 1991 CAPLUS
- (5) Fauteux, D; US 5601623 A 1997 CAPLUS
- (6) Hitachi Maxell Kk; JP 59173955 A 1984 CAPLUS
- (7) Hitachi Maxell Kk; JP 60059655 A 1985 CAPLUS
- (8) Joshi, A; US 4317874 A 1982 CAPLUS
- (9) Kazuo, S; US 5035965 A 1991 CAPLUS
- (10) Matsushita Electric Ind Co Ltd; JP 01021870 A 1989 CAPLUS
- (11) Ralph, J; US 5522955 A 1996 CAPLUS
- (12) Sankar, D; US 5437692 A 1995 CAPLUS
- (13) Tuttle, M; US 5494495 A 1996
- (14) Yasuo, F; US 5019467 A 1991 CAPLUS

L33 ANSWER 33 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1998-062176 [06] WPIX

CR 1999-418173 [35]

DNN N1998-048948 DNC C1998-021640

TI Torsionally biased latch device for a cellular telephone battery housing  
- comprises a flange integrally formed with an elongated beam having a  
predetermined length.

DC A84 Q47

IN PATTERSON, G S; WEADON, M W

PA (TELF) ERICSSON INC

CYC 78

PI US 5700042 A 19971223 (199806)\* 7p E05C019-06

WO 9804019 A1 19980129 (199811) EN 18p H01R013-506

RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT  
SD SE SZ UG ZW

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE  
GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW  
MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU  
ZW

AU 9740396 A 19980210 (199827) H01R013-506

EP 914692 A1 19990512 (199923) EN H01R013-506

R: BE DE ES FI FR GB IT SE

CN 1226345 A 19990818 (199951) H01R013-506

BR 9710549 A 19990817 (199954) H01R013-506

JP 11514617 W 19991214 (200009) 25p B65D043-14

AU 724050 B 20000914 (200051) H01R013-506

RU 2152114 C1 20000627 (200061) H01R013-506

JP 3174582 B2 20010611 (200135) 7p B65D043-14

KR 281473 B 20010201 (200211) H01M002-10

EP 914692 B1 20020327 (200222) EN H01R013-506

R: BE DE ES FI FR GB IT SE

DE 69711389 E 20020502 (200237) H01R013-506

ADT US 5700042 A US 1996-685479 19960724; WO 9804019 A1 WO 1997-US11902

19970710; AU 9740396 A AU 1997-40396 19970710; EP 914692 A1 EP 1997-937961

19970710, WO 1997-US11902 19970710; CN 1226345 A CN 1997-196647 19970710;

BR 9710549 A BR 1997-10549 19970710, WO 1997-US11902 19970710; JP 11514617

W WO 1997-US11902 19970710, JP 1998-506975 19970710; AU 724050 B AU

1997-40396 19970710; RU 2152114 C1 WO 1997-US11902 19970710, RU  
1999-103675 19970710; JP 3174582 B2 WO 1997-US11902 19970710, JP  
1998-506975 19970710; KR 281473 B WO 1997-US11902 19970710, KR 1998-710924  
19981231; EP 914692 B1 EP 1997-937961 19970710, WO 1997-US11902 19970710;  
DE 69711389 E DE 1997-611389 19970710, EP 1997-937961 19970710, WO  
1997-US11902 19970710

FDT AU 9740396 A Based on WO 9804019; EP 914692 A1 Based on WO 9804019; BR  
9710549 A Based on WO 9804019; JP 11514617 W Based on WO 9804019; AU  
724050 B Previous Publ. AU 9740396, Based on WO 9804019; RU 2152114 C1  
Based on WO 9804019; JP 3174582 B2 Previous Publ. JP 11514617, Based on WO  
9804019; KR 281473 B Based on WO 9804019; EP 914692 B1 Based on WO  
9804019; DE 69711389 E Based on EP 914692, Based on WO 9804019

PRAI US 1996-685479 19960724

IC ICM B65D043-14; E05C019-06; H01R013-506

ICS H05K005-02; H05K005-03

ICA H01M002-10

AB US 5700042 A UPAB: 20020613

A torsionally biased latch (10) is claimed, where the latch (10) is integrally moulded at one end of a retainer member (16) of a cover assembly (12), while outwardly extending tabs on the opposite end of the cover (12) engage a respective pair of notches formed in the housing (14) to maintain the cover in a fixed position. The latch has an elongated beam section (22) with spaced-apart end portions (26,28) and a centrally disposed mid-portion (30) with edge surfaces (38,40) adapted to engage mating surfaces (42) in the housing (14) when in the closed position. An opening (48) in the housing (14) provides access for thumb or finger pressure to be applied to a tab (46) to disengage the latched surfaces (38,40,42).

The latch is made from moulded polycarbonate/ABS thermoplastic material.

USE - Used on relatively small instruments, e.g. to releasably secure a cover assembly for a battery compartment of a cellular telephone.

ADVANTAGE - A low cost latch arrangement, that is durable, has good feel, occupies little space, and has a latch arrangement which does not normally make skin contact and is therefore protected from the adverse effects of skin oils.

Dwg.1/5

FS CPI GMPI

FA AB; GI

MC CPI: A04-C03; A05-E06B; A11-B; A12-E05

L33 ANSWER 34 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1997-026543 [03] WPIX

DNN N1997-022324

TI Terminal assembly structure for battery used in portable audio equipment e.g. portable type recorder - has hinge part in hinge shaft that is inserted in inner side of termination and cylinder parts.

DC V04 W04 X16

PA (AIWA-N) AIWA KK

CYC 1

PI JP 08287669 A 19961101 (199703)\* 7p G11B033-12  
 ADT JP 08287669 A JP 1994-261028 19940930  
 PRAI JP 1994-261028 19940930  
 IC ICM G11B033-12  
 AB JP 08287669 A UPAB: 19970122

The assembly structure (41) has an elastic part (44) that is isolated from a pair of cylindrical parts (43a,43d) by pair of notches (42a,42b). The elastic part is provided at an edge part (46). The termination (45) of the elastic part is bent such that it crosses through the internal diameter of the cylindrical parts.

A hinge shaft (21) is attached to the cylinder parts. A hinge part (24) of the hinge shaft is inserted through the inner side of the elastic part termination and the cylinder parts.

ADVANTAGE - Maintains contact of hinge part satisfactorily even when impact and press power are applied. Obtains stable electric conduction.  
 Dwg.3/11

FS EPI  
 FA AB; GI  
 MC EPI: V04-S03; W04-B12D; W04-B12H; X16-F05; X16-F06

L33 ANSWER 35 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
 AN 1996-373567 [38] WPIX  
 DNN N1996-314342

TI Battery charger for battery used in portable electrical equipment e.g. portable phone - comprises battery charger unit connectable with solar cell providing power to charge battery, with cell being stowed in compartment when not in use.

DC P24 Q47 U12 V04 W01 X15 X16  
 IN HAGA, T; HIKOSAKA, M; KAIDO, Y; KAJI, M; ONO, M; TAKABATAKE, Y  
 PA (SAOL) SANYO ELECTRIC CO LTD  
 CYC 6

PI	GB 2298325	A	19960828 (199638)*	36p	H02J007-00
	DE 19606679	A1	19960829 (199640)	29p	H02J007-35
	FR 2731119	A1	19960830 (199642)		H02J007-35
	JP 08237883	A	19960913 (199647)	5p	H02J007-35
	JP 08308120	A	19961122 (199706)	4p	H02J007-00
	JP 09097917	A	19970408 (199724)	6p	H01L031-042
	JP 09148608	A	19970606 (199733)	7p	H01L031-042
	US 5701067	A	19971223 (199806)	27p	H01M010-44
	FR 2750254	A1	19971226 (199808)		H01L031-045
	US 5855692	A	19990105 (199909)		H01L025-00
	GB 2298325	B	19991124 (199952)		H02J007-00
	CN 1140341	A	19970115 (200044)		H01M010-44

ADT GB 2298325 A GB 1996-2723 19960209; DE 19606679 A1 DE 1996-19606679 19960222; FR 2731119 A1 FR 1996-2271 19960223; JP 08237883 A JP 1995-37026 19950224; JP 08308120 A JP 1995-105419 19950428; JP 09097917 A JP 1995-253563 19950929; JP 09148608 A JP 1995-305999 19951124; US 5701067 A US 1996-598019 19960207; FR 2750254 A1 Div ex FR 1996-2271 19960223, FR 1997-9730 19970730; US 5855692 A Div ex US 1996-598019 19960207, US 1997-904614 19970801; GB 2298325 B GB 1996-2723 19960209; CN 1140341 A CN 1996-106159 19960427  
 FDT US 5855692 A Div ex US 5701067

PRAI JP 1995-305999 19951124; JP 1995-37026 19950224; JP 1995-105419  
19950428; JP 1995-253563 19950929

IC ICM H01L025-00; H01L031-042; H01L031-045; H01M010-44; H02J007-00;  
H02J007-35

ICS A45C011-00; A45C015-00; E05D001-00; E05D007-00; H01L031-04;  
H01L031-05; H01R035-02; H01R035-04; H02N006-00

AB GB 2298325 A UPAB: 19960924

The battery charger (31) includes a solar cell assembly (39) for charging the **battery** (32), and the compartment (35) for stowing the solar cell assembly (39) when not charging. The charger may have a battery mount section (33) on one surface and a solar cell stowing recess (35) with a cover (36) on an opposite surface. The solar cell assembly may **fold** for stowing, or solar panel units may be stacked for stowing and electrically and mechanically coupled together with snap fasteners for charging.

An alternative charger in the form of a bag has a heat ventilating section adjacent which a portable phone to be charged can be held within the bag. Snap fasteners extend through a side of the bag to connect to a solar cell assembly for charging. A hinge arrangement between solar cell panels may incorporate flexible interconnecting **leads**, pivot rods and a protective laminate film over front and rear surfaces of the assembly.

USE/ADVANTAGE - Provides battery charge with solar cells which is easily portable and can quickly be set up to charge run-down batteries in portable electrical equipment used outdoors. Bag can carry portable electrical equipment housing rechargeable batteries without degrading batteries. Provides flexible solar cell appts. in which open circuited **leads** are prevented and **leads** can bend with small radius of curvature reducing **lead** damage and poor connection.

Dwg.3/24

FS EPI GMPI

FA AB; GI

MC EPI: U12-A02A; W01-C01D3; W01-C01E5; X15-A02; X16-F09; X16-G02A

L33 ANSWER 36 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1996-019861 [02] WPIX

DNN N1996-016615

TI Pocket type electrode **assembly** for lead-acid storage **battery** - includes synthetic resinous separator and glass mat coordinately stacked together and then **folded** to position separator within glass mat.

DC X16

IN NAKANO, K

PA (FURB) FURUKAWA DENCHI KK

CYC 2

PI US 5470676 A 19951128 (199602)\* 8p H01M002-18  
MX 189208 B 19980624 (200032) H01M002-018

ADT US 5470676 A US 1994-341152 19941116; MX 189208 B MX 1994-9210 19941129

PRAI JP 1993-68909U 19931130

IC ICM H01M002-018; H01M002-18

AB US 5470676 A UPAB: 19960115

A stable and durable electrode assembly is described. A synthetic

**separator** layer, an electrolyte-permeable inert film 25-50  $\mu\text{m}$  thick is situated. The film has a very small current-focussing opening produced by piercing, **punching** or melting it. The total electrolytic current is focussed through this opening. The surface of the opening is at least 10-fold smaller than the surface of the **separator** layer. Materials of the film may be selected from Teflon, propylene, Ni or Inconel. The **battery** is suitable as an energy source for electronic watches, heartpacemakers or as voltage sources for electronic information storage units. The efficiency is shown of an alkaline primary button-type **battery** with a HgO cathode and a Zn powder **anode**.

ST primary button **battery** current focussing; mercury oxide zinc button **battery**

IT **Batteries**, primary  
(mercury oxide-zinc, for small load currents and long-shelf life and durability)

IT 7440-66-6, uses and miscellaneous

RL: USES (Uses)

(**batteries**, with mercuric oxide, for small load currents and long shelf life)

IT 21908-53-2

RL: PRP (Properties)

(**battery**, with zinc, for small load current and long shelf life)

L33 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1980:642708 CAPLUS

DN 93:242708

ED Entered STN: 12 May 1984

TI **Lead-acid batteries**

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC H01M004-14; H01M002-24

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55098468	A2	19800726	JP 1979-5001	19790120
PRAI	JP 1979-5001		19790120		

AB Pb or Pb alloy **expanded** mesh or perforated sheet is applied with a **cathode** mix and an **anode** mix on each half of the sheet, **folded** at the center, placed on a partition in a **battery**, and a **separator** is inserted between the **folded** unit. The method results in good cell connections.

ST **lead acid battery manuf**

IT **Batteries**, secondary  
(lead-acid, manufacture of)

L33 ANSWER 63 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1979:441958 CAPLUS  
 DN 91:41958  
 ED Entered STN: 12 May 1984  
 TI Multicelled lead storage battery  
 IN Golz, Hans Joachim  
 PA VARTA Batterie A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC H01M010-14; H01M002-02  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2737838	A1	19790301	DE 1977-2737838	19770823
	DE 2737838	B2	19800327		
	DE 2737838	C3	19801120		
	FI 7801981	A	19790224	FI 1978-1981	19780621
	FI 71634	B	19861010		
	AT 7804556	A	19810115	AT 1978-4556	19780622
	AT 363532	B	19810810		
	FR 2408919	A1	19790608	FR 1978-20236	19780706
	FR 2408919	B1	19810814		
	NO 7802387	A	19790226	NO 1978-2387	19780707
	NO 148275	B	19830530		
	NO 148275	C	19830907		
	ES 472065	A1	19791001	ES 1978-472065	19780726
	DK 7803428	A	19790224	DK 1978-3428	19780802
	SE 7808392	A	19790224	SE 1978-8392	19780804
	SE 442465	B	19851223		
	SE 442465	C	19860410		
	BR 7805365	A	19790417	BR 1978-5365	19780821
	CH 636989	A	19830630	CH 1978-8844	19780821
	BE 869894	A1	19781218	BE 1978-190010	19780822
	NL 7808663	A	19790227	NL 1978-8663	19780822
	GB 2003650	A	19790314	GB 1978-34096	19780822
	GB 2003650	B2	19820310		
	CA 1105992	A1	19810728	CA 1978-309809	19780822
	JP 54045753	A2	19790411	JP 1978-102673	19780823
	US 4615958	A	19861007	US 1983-507953	19830624
PRAI	DE 1977-2737838		19770823		
	US 1978-931162		19780804		
	US 1981-230543		19810202		
AB	A Pb-acid multicell battery comprises a plurality of electrode blocks, each block consisting of folded together cathode and anode strips with an in-between sandwiched separator. A method to manufacture these batteries is also disclosed.				
ST	lead acid multicell battery				
IT	Batteries, secondary (lead-acid, multicell)				

L33 ANSWER 64 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1979:441957 CAPLUS  
 DN 91:41957  
 ED Entered STN: 12 May 1984  
 TI Multicelled lead storage battery  
 IN Golz, Hans Joachim  
 PA VARTA Batterie A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC H01M010-14; H01M002-02  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2737837	A1	19790301	DE 1977-2737837	19770823
	DE 2737837	B2	19800327		
	DE 2737837	C3	19801113		
	AT 7804257	A	19810115	AT 1978-4257	19780612
	AT 363531	B	19810810		
	FI 7801971	A	19790224	FI 1978-1971	19780620
	FI 71633	B	19861010		
	CH 641914	A	19840315	CH 1978-6697	19780620
	FR 2408918	A1	19790608	FR 1978-20235	19780706
	FR 2408918	B1	19810911		
	NO 7802386	A	19790226	NO 1978-2386	19780707
	NO 147463	B	19830103		
	NO 147463	C	19830413		
	NL 7807418	A	19790227	NL 1978-7418	19780710
	NL 178109	B	19850816		
	NL 178109	C	19860116		
	SE 7808102	A	19790224	SE 1978-8102	19780724
	SE 442565	B	19860113		
	SE 442565	C	19860424		
	DK 7803427	A	19790224	DK 1978-3427	19780802
	BE 869893	A1	19781218	BE 1978-190009	19780822
	GB 2002949	A	19790228	GB 1978-34095	19780822
	GB 2002949	B2	19820526		
	BR 7805416	A	19790417	BR 1978-5416	19780822
	JP 54045752	A2	19790411	JP 1978-102672	19780823

PRAI DE 1977-2737837 19770823

AB A Pb-acid multicell battery comprises a covered case containing a plurality of electrode blocks, each block consisting of folded together cathode and anode strips with in-between sandwiched separators. A method to manufacture these batteries is also disclosed.

ST lead acid multicell battery

IT Batteries, secondary  
 (lead-acid, multicell)

L33 ANSWER 65 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
 AN 1978-01778A [01] WPIX  
 TI **Battery** plate and separator **assembly** - by feeding a  
**battery** plate into the centre of a separator sheet.  
 DC L03 P73 X16  
 PA (ELTA) ELTRA CORP  
 CYC 1  
 PI US 4063978 A 19771220 (197801)\*  
 PRAI US 1974-475480 19740603  
 IC B32B031-12; H01M002-14  
 AB US 4063978 A UPAB: 19930901

**Battery** plate is **assembled** between separators by holding a flexible planar separator material sheet between opposed and spaced separator guides so that the sheet is supported in a vertical position. The battery plate is moved in a direction normal to the sheet to intersect the sheet at its mid point and draw the sheet from between the guides and **fold** the sheet over the plate. Subsequently the facing surfaces of the sheet are adhered one to the other to form an envelope about the plate.

Used for assembly plates of a **lead acid** battery. Process provides fast simple automatic **assembly** of **battery** plate and separator, which previously was a time consuming manual operation.

FS CPI EPI GMPI  
 FA AB  
 MC CPI: L03-E01B1

L33 ANSWER 66 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
 AN 1977-G6178Y [32] WPIX  
 TI Cell structure for thermal type deferred action batteries - comprises several **folded** metal cells in ring providing high EMF output.  
 DC X16  
 PA (CATL) CATALYST RES CORP  
 CYC 3  
 PI GB 1482621 A 19770810 (197732)\*  
 FR 2332688 A 19770722 (197734)  
 SE 7110343 A 19770815 (197735)  
 PRAI GB 1971-34295 19710721  
 IC H01M004-08; H01M006-36; H01M021-14  
 AB GB 1482621 A UPAB: 19930901

An electrode unit for a thermal-type deferred action electric battery is formed from a sheet of nickel on one part of which a layer of colcinm is provided. In the **assembly** of cells for the **battery** (10-16) each cell has a pair of electrodes and an electrolyte.

Three distinct structures are provided, first and second end cells (10, 16) and central cells (11-15). The first end cell (10) has an inner electrode (17) and an extension (18) constituting one of the **leads** for the assembly. A second **lead** is provided by extension (19) to the other and cell. The end cells are **folded** so that the coated surfaces are opposed and a central electrode with prepared electrolyte and depolariser pads on each surface is place within each end cell block.



FS EPI  
FA AB

L33 ANSWER 67 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1975:550319 CAPLUS  
DN 83:150319  
ED Entered STN: 12 May 1984  
TI Zinc alkaline secondary **battery**  
IN Ishida, Osamu; Noda, Masaaki  
PA Hitachi Maxell, Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
NCL 57C22; 57C21  
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50024738	A2	19750317	JP 1973-79405	19730613
PRAI	JP 1973-79405		19730613		

AB In a Zn alkaline secondary **battery** in which an electrolyte is kept in the fine pores of the **cathode**, **anode**, and **separator**, the discharge capacity of the **cathode** is lowered below that of the **anode**, the O [7782-44-7] evolved at the **cathode** during charging is disposed of at the **anode**, the **anode** surface is made water repellent, and the concentration of the alkaline electrolyte is kept at 3-20%. By smooth gas removal at the **anode**, safe alkaline Zn **batteries** are obtained. In conventional Zn alkaline secondary **batteries** with rapid O evolution and without O removal, explosions are possible. By **making** the **anode** water repellent, a thin electrolyte layer is formed on its surface with the resultant shortening of the O diffusion length and smooth removal of O at the **anode**. Thus, a Zn **anode** with discharge capacity .apprx.1.5 A-hr, prepared by coating a Cu-plated Fe current collecting material with a mixture of ZnO 15.2, H<sub>2</sub>O 7, and poly(vinyl alc.) 0.1 parts, was placed in contact with a **separator** and folded in half, the **separator** being on the outside. The hollow center was filled with a porous air-permeable woven fluorinated resin, 2 Ni **cathodes** with a 0.7 A-hr discharge capacity each were placed to the outside of the **separator**, and an alkaline electrolyte was filled into the fine pores of the electrodes and the **separator**. During charging, the O evolved at the **cathode** dissolved in the electrolyte, traveled to the **anode** surface in contact with the porous material, and owing to the water repelling nature of the porous material only a small amount of electrolyte was present and O removal was efficient.

ST secondary **battery** zinc safety  
IT Safety  
(of zinc-alkaline **batteries**, oxygen evolution in relation to)  
IT **Batteries**, secondary  
(zinc-alkaline, oxygen evolution control in and safety of)

IT 7782-44-7, uses and miscellaneous  
RL: USES (Uses)  
(evolution control of, in zinc-alkaline batteries)

L33 ANSWER 68 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1975-B9270W [07] WPIX

TI **Battery** connecting **assembly** - has camming plate with opening and small **notches** for rapid mounting.

DC X16

PA (RADC) RCA CORP

CYC 1

PI US 3864172 A 19750204 (197507)\*

PRAI US 1973-361305 19730517

IC H01M001-02

AB US 3864172 A UPAB: 19930831

The battery case has an protruding member with a pair of lugs extending radially from the protruding member. Each of the lugs includes a symmetrically shaped camming portion of gradually increasing and then decreasing extension from the inward surface of the lug. The protruding member is adapted to be inserted into the opening in the plate by passing the pair of lugs through the **notches** and after being inserted through the opening to be given partial rotation to carry the lugs out of alignment with the **notches** so that the camming portion is under the plate.

FS EPI

FA AB

L33 ANSWER 69 OF 74 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1975-B9053W [07] WPIX

TI Appts for operations associated with **assembly** of storage **battery** - uses base member provided with lifting handles and nut and bolt pivot.

DC Q35

PA (GEBA) GEN BATTERY CORP

CYC 1

PI US 3863775 A 19750204 (197507)\*

PRAI US 1973-414520 19731109

IC B65G007-00

AB US 3863775 A UPAB: 19930831

Base member (11) is provided to be of sufficient length greater than side (24) of battery (20) to extend beyond opposite ends (22). A pair of cylindrical handles (13) each having a **notched** end (14) configures for pivotal mounting, are pivotally mounted on the shaped-apart ends of base member (11) by nut-and-bolt pivot means (12) configured for allowance of pivotal movement. The medial portion (17) of handles (13) is generally straight and distal end (18) of handles (13) is angularly disposed in relation to medial portion (17) to facilitate upward manual lifting. A rollover support means (16) of the tubular type is associated with and rigidly connected parallel to base member (11) by support struts (15).

FS GMPI

FA AB

L33 ANSWER 70 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1972:455690 CAPLUS  
 DN 77:55690  
 ED Entered STN: 12 May 1984  
 TI Electrochemical cells with a lithium **anode**  
 IN Blondel, Alain; Jammet, Jean Firmin  
 PA Societe des Accumulateurs Fixes et de Traction  
 SO U.S., 5 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC H01M  
 NCL 136006000  
 CC 77-2 (Electrochemistry)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3663721	A	19720516	US 1970-59993	19700731
	FR 2055865	A5	19710514	FR 1969-26543	19690801
	JP 51010326	B4	19760403	JP 1970-66206	19700730
PRAI	FR 1969-26543		19690801		

AB Li **anodes** are prepared by cold extrusion into sheet form. The extruded sheets are severed into prescribed band lengths and the bands are pleated in zig-zag form to provide multiple **folds** or **pleats**. Thin **cathode** plates are positioned between pleats, being insulated from the pleated Li **anode** by suitable separating means. The **cathode** plates parallel to the width of the bands are situated to leave a zone along at least 1 edge of the plated **anode** band that has no opposite **cathode** plate counterpart. Elec. connections are secured to the pleated band in the zone and are in the form of tabs, for example, of stainless steel, spot welded to an **expanded** metal **strip** which in turn is fastened to the Li **anode** band by ultrasonic welding. An enclosing sheath or envelope of insulating material is inserted as a **separator** prior to pleating or the **cathode** plates may be individually sheathed in **separator** material.

ST electrochem cell lithium **anode**  
 IT **Anodes**  
     (battery, lithium for primary)  
 IT **Batteries**, primary  
     (with lithium **anodes**)  
 IT 7439-93-2, uses and miscellaneous  
 RL: USES (Uses)  
     (**anodes**, primary **battery**)

L33 ANSWER 71 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1971:82516 CAPLUS  
 DN 74:82516  
 ED Entered STN: 12 May 1984  
 TI Metal-oxygen **battery**  
 IN Argent, Edwin J.; Gillespie, Peter J.

PA Energy Conversion Ltd.  
 SO Brit., 2 pp. Division of Brit. 1,220,096  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 IC H01M  
 CC 77 (Electrochemistry)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1220097		19710120	GB	19690401
AB	Division of Brit. 1,220,-096. The metal-O <b>battery</b> consists of 2 spaced-apart <b>cathode</b> layers adjacent 1 edge and 1 centrally disposed on 1 face of an air-permeable sheet member of an elec. conductive material. An <b>anode</b> is on each surface, adjacent the edge opposed to the edge of the sheet-forming member. An electrolyte-resistant absorbent material is on the outer surfaces of the <b>anode</b> . The sheet is <b>folded</b> into an <b>S-form configuration</b> , so that the 2 <b>cathode</b> layers have an <b>anode</b> layer between. An air-permeable, elec. insulating <b>separator</b> is placed adjacent uncoated surfaces of the sheet form members. The sheet form members may also be produced by coating a web and then <b>cutting</b> into appropriate lengths. The specification does not indicate which metals or electrolytes may be employed nor is a drawing of the <b>arrangement</b> shown.				
ST	metal oxygen <b>battery</b> ; oxygen metal <b>battery</b> ; <b>battery</b> metal oxygen				
IT	<b>Batteries</b> , primary (metal-oxygen)				

L33 ANSWER 72 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1969:83669 CAPLUS  
 DN 70:83669  
 ED Entered STN: 12 May 1984  
 TI Fuel cell with grid electrode  
 IN Stankavich, Anthony J.; Geckle, Thomas E.  
 PA Carrier Corp.  
 SO U.S., 5 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC H01M  
 NCL 136086000  
 CC 77 (Electrochemistry)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3428492	A	19690218	US 1965-455134	19650512
PRAI	US 1965-455134		19650512		
AB	An electrode is fabricated by pressing into a matrix (0.07 in. thick) catalyst-coated 20-mesh Ni-wire screen (wire diameter 0.014 in.) under a pressure 2 tons/in.2 and compacting the periphery of the matrix at 5				

tons/in.<sup>2</sup> The fuel and oxidant electrodes are separated by electrolyte-impregnated microporous asbestos carriers. Both electrodes are provided with nonreactive, conductive grid current-collector which is attached to a terminal post. The assembly is positioned in a cavity formed by oxidant and fuel sections of the cell so that the grooves in the casing are covered by the electrode. The cavities are provided with spiderweb-like supporting elements having radial ribs in contact with the adjacent current collector. **Notches** adjacent to the electrode assembly insure circumferential and radial movement of fluid. Gas furnished to the electrode passes through a vent chamber formed by the end wall of the casing and the end of the electrode assembly. The arrangement assures radial routing of gas through the oxidizing electrode. When the cells are **assembled** into a **battery**, the terminal casing sections form fuel and oxidant sections, resp., and the intermediate sections are oxidant and fuel sections placed back to back. A battery containing 20 cells and operating with O<sub>2</sub> or air as oxidant, KOH as electrolyte, and N<sub>2</sub>H<sub>4</sub> dissolved in the electrolyte as fuel, has internal resistance of 0.11 ohm at 60 amp. load.

ST fuel cells; hydrazine fuel cells; oxygen fuel cells; air fuel cells  
 IT Electrodes  
     (fuel-cell, grid, for hydrazine-oxygen)  
 IT Fuel cells  
     (hydrazine-oxygen, with grid electrodes)

L33 ANSWER 73 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1968:456539 CAPLUS  
 DN 69:56539  
 ED Entered STN: 12 May 1984  
 TI Primary cell having a **folded** magnesium **anode**  
 IN Robinson, John L.; Ayers, Earl D.  
 PA Dow Chemical Co.  
 SO U.S., 4 pp.  
     CODEN: USXXAM  
 DT Patent  
 LA English  
 NCL 136083000  
 CC 77 (Electrochemistry)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3393097	A	19680716	US 1966-573739	19660729
PRAI	US 1966-573739		19660729		

AB In the construction of primary cells, Mg and 70% Mg **alloy anode** and 6-12 mils thick porous **separator** (Kraft paper) are **folded** into slanted accordion **folds**. A hydrophobic, compressible material (1/16-1/4 in. thick) having total void space to volume ratio of 4:1 (resilient, **expanded** or **foamed** synthetic plastics) is placed between the **separators**. The **folds** are filled with **cathode** mix (75-95% MnO<sub>2</sub> and 25 to 5% C black). The **cathode** (C-loaded vinyl plastic) is inserted into the **cathode** mix and looped over one end of the cell to form a terminal. The porous **separator** is

impregnated with .apprx.150-200 g. alkali metal or alkaline earth metal bromides. The **anode** configuration assures uniform pressure across the electrodes. The cell has improved current delivering capacity per unit volume and weight. The cell can be adapted for automated manufacture

ST magnesium **anodes** primary cells; **anodes** Mg primary cells; primary cells Mg **anodes**; folded Mg **anodes**

IT Magnesium alloys, base  
(**anodes**, dry-cell, folded)

IT Batteries, primary  
(dry-cell, with folded magnesium alloy **anode**)

L33 ANSWER 74 OF 74 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1968:440732 CAPLUS

DN 69:40732

ED Entered STN: 12 May 1984

TI Primary cell with U-shaped magnesium **anodes**

IN Nelson, Charles E.

PA Dow Chemical Co.

SO U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

NCL 136100000

CC 77 (Electrochemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3390016	A	19680625	US 1965-476020	19650730
PRAI	US 1965-476020		19650730		

AB A primary cell consists of a plurality of Mg or Mg alloy (70% Mg) sheets, which have U-shaped transverse cross-sectional configuration, and between the adjacent **folds** of each U-shaped **anode** there is a 1/16-1/4-in. layer of compressible material having a void space to volume ratio of 4:1, such as resilient **expanded** or **foam** synthetic plastics (**expanded** polystyrene). Ionically conductive, electronically nonconductive, electrolyte-impregnated, 6-12-mil thick porous **separators**, such as Kraft paper are placed against the outer surfaces of the **anodes**. Rod-like C **cathodes** are placed between the **separators**, with the space between them filled with a **cathode** mix, such as a mixture of 75-95% MnO<sub>2</sub> and 25-5% C. In order to prevent moisture loss, the compressible sheets may be loaded with H<sub>2</sub>O, in which case the **anodes** are provided with corrosion-inhibiting coating. The cell has large current capacity in relation to its **size**.

ST primary cell Mg **anodes**; cell primary Mg **anodes**;  
**anodes** Mg primary cell; magnesium **anodes** primary cell

IT Magnesium alloys, base  
(aluminum-, **anodes** for primary dry cells)

IT Batteries, primary  
(dry-cell, with magnesium and magnesium-aluminum alloy)

**anodes)**

IT Aluminum **alloys**, containing  
(magnesium-, **anodes** for primary dry cells)  
IT 7439-95-4, uses and miscellaneous  
RL: USES (Uses)  
(**anodes**, primary dry-cell)

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